

## DECLARAȚIE DE PERFORMANȚĂ

OT 5001/2021/CPR/XPS Versiunea nr. 1

1. COD UNIC DE IDENTIFICARE A PRODUSULUI – TIPULUI:

**XPS – EN 13164 – T1 – CS(10Y)500 – WL(T)0,7 **PENOPLEX® 45****

2. UTILIZARE PREVĂZUTĂ:

**Izolație termică a clădirilor**

3. PRODUCĂTOR:

**ORANGE TOWER SRL, str. A. Bernardazzi, 19, mun. Ungheni,  
or. Ungheni, Republica Moldova**

4. REPREZENTANT AUTORIZAT:

**Irelevant**

5. SISTEM DE EVALUARE ȘI VERIFICARE A PERFORMANȚELOR:

**Sistemul 3**

6. STANDARD ARMONIZAT:

**SM EN 13164:2014 + A1:2016**

7. ORGANISME NOTIFICATE:

**No. 1434: POLSKIE CENTRUM BADAN I CERTYFIKACJI S.A.  
(Centrul polonez pentru testare și certificare), Jakuba Wejhera  
str.18a, 80-346, Gdańsk, Polonia**



## 8. PERFORMANȚA DECLARATĂ A PENOPLEX 45

| CARACTERISTICI ESENȚIALE                                                                                                    |                                                                                                 |                                            | PERFORMANȚĂ                                  | SPECIFICAȚII TEHNICE ARMONIZATE |
|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------|---------------------------------|
| Reacția la foc                                                                                                              |                                                                                                 | Euroclass                                  | E                                            | SM EN 13164:2014 + A1:2016      |
| Ardere cu flacără                                                                                                           |                                                                                                 | Nu au fost încă definite metode armonizate | NPD                                          |                                 |
| Toleranțe dimensionale                                                                                                      |                                                                                                 | Clasa                                      | T1                                           |                                 |
| Rezistența termică și conductivitatea termică                                                                               | Conductivitatea termică declarată $\lambda_d$ [W/m·K]                                           | Grosimea nominală $d_N$ [mm]               | Rezistența termică declarată $R_d$ [m²·K/W ] |                                 |
|                                                                                                                             | 0,034                                                                                           | 40                                         | 1,15                                         |                                 |
|                                                                                                                             | 0,034                                                                                           | 50                                         | 1,45                                         |                                 |
|                                                                                                                             | 0,034                                                                                           | 60                                         | 1,75                                         |                                 |
|                                                                                                                             | 0,034                                                                                           | 80                                         | 2,35                                         |                                 |
|                                                                                                                             | 0,034                                                                                           | 100                                        | 2,90                                         |                                 |
| Rezistența la compresiune                                                                                                   | Rezistența la compresiune sau forța de compresiune la o deformare de 10%                        | CS(10\Y)                                   | CS(10\Y)500 (≥500 kPa)                       |                                 |
| Fluajul la compresiune                                                                                                      | Fluajul la compresiune după o deformare relativă de 2% timp de 10 ani                           | CC(2/1,8/10)                               | NPD                                          |                                 |
| Rezistența la tracțiune                                                                                                     | Rezistența la tracțiune perpendiculară pe fețe                                                  | TR                                         | NPD                                          |                                 |
| Permeabilitatea la apă                                                                                                      | Absorbția pe termen lung a apei                                                                 | WL(T)                                      | WL(T)0,7 (≤ 0,7 [Vol.-%])                    |                                 |
|                                                                                                                             | Absorbția pe termen lung a apei prin difuzie                                                    | WD(V)                                      | NPD                                          |                                 |
| Permeabilitatea la vapori de apă                                                                                            | Factorul de rezistență la difuzia vaporilor de apă                                              | MU                                         | NPD                                          |                                 |
| Durabilitatea reacției la foc în cazul expunerii la căldură, factori de mediu, îmbătrânire/ degradare/ îngheț – dezgheț     | Reacția la foc a produselor XPS nu se modifică în timp                                          |                                            |                                              |                                 |
| Durabilitatea rezistenței termice în cazul expunerii la căldură, factori de mediu, îmbătrânire/ degradare/ îngheț – dezgheț | Stabilitatea dimensională în condițiile specificate, 70°C; 90% r.h.                             | DS                                         | NPD                                          |                                 |
|                                                                                                                             | Deformarea sub o sarcină specifică de compresie de 40 kPa și la condiții de temperatură de 70°C | DLT                                        | NPD                                          |                                 |
|                                                                                                                             | Rezistența la îngheț – dezgheț după absorbția îndelungată a apei ca urmare a difuziei           | FTCD                                       | NPD                                          |                                 |
|                                                                                                                             | Rezistența la îngheț – dezgheț după absorbția îndelungată a apei ca urmare a scufundării        | FTCI                                       | NPD                                          |                                 |
| Substanțe periculoase                                                                                                       | Emisia de substanțe periculoase către mediul interior                                           | —                                          | —                                            |                                 |

NPD = Performanță nedeterminată

9. Performanța produsului identificat mai sus este în conformitate cu setul de performanțe declarate. Această declarație de performanță este emisă în conformitate cu Regulamentul UE Nr. 305/2011, producătorul identificat mai sus asumându-și întreaga responsabilitate

SEMNAȚ PENTRU ȘI ÎN NUMELE PRODUCĂTORULUI DE CĂTRE:  
**Vasily Deli, Director, ORANGE TOWER SRL.**  
 Republica Moldova, Ungheni, 01 August 2021





ORGANISMUL DE CERTIFICARE „CVALIMETRITOT” SRL



# CERTIFICAT DE CONFORMITATE



Nr. de înregistrare

001403

Data emiterii:

26 aprilie 2019

Valabil până la:

31 decembrie 2020

ORGANISMUL DE CERTIFICARE

Nr. OCpr-029

SRL "CVALIMETRITOT", MD-2044, mun. Chișinău, str. Meșterul Manole, 18, tel.42-10-78  
email: cvalimetritot@mail.ru, [www.cvalimetritot.md](http://www.cvalimetritot.md)

PRIN PREZENTUL DOCUMENT SE CONFIRMĂ FAPTUL, CĂ PRODUSELE IDENTIFICATE ASTFEL:  
DENUMIREA / DESCRIEREA

Codul NC MD

7308

**Panouri metalice tristrat cu termoizolant din vată minerală**  
fabricate conform SMV 309:2013 (Anulat).

Produse fabricate în serie

SÎNT CONFORME CU CERINȚELE OBLIGATORII STABILITE ÎN :

Reglementarea tehnică cu privire la cerințele minime pentru comercializarea produselor pentru construcții,  
aprobată prin Hotărîrea Guvernului Nr.913 din 25.07.2016;  
SMV 309:2013 pct.5.2.1.1, 5.2.1.2, 5.2.1.3

PRODUCĂTOR

SRL "DASTERUM", MD 2060, mun. Chișinău, bd. Traian 23/1, ap.(of.) 284  
Baza de producere - mun. Chișinău, str. Uzinelor, 188

Codul țării

MD

SOLICITANT

Producătorul

Codul IDNO

1003600065144

CERTIFICATUL ESTE ELIBERAT ÎN BAZA

Raportului de încercări Nr. 09/c-4 din 24 aprilie 2019, eliberat de L.Î. al "FISTFOG" SRL,  
mun. Chișinău, str. Petru Rareș, 62, certificat de acreditare Nr.LÎ-042 valabil pînă la 27.05.2022;  
Raportului asupra evaluării conformității produselor Nr.14 din 25 aprilie 2019, eliberat de  
OC "CVALIMETRITOT" SRL.

INFORMAȚIE SUPPLEMENTARĂ:

Supravegherea produselor certificate va fi efectuată de O.C. "CVALIMETRITOT" S.R.L.  
una dată la șase luni.  
Sistemul de certificare 2+

Titularul prezentului certificat este obligat să aplice marca națională de conformitate SM pe produsele specificate în prezentul  
certificat



Conducătorul organismului  
de certificare

Serghei VIZITIU

În atenția antreprenorilor și organelor de control!

Copile certificatelor de conformitate se legalizează cu ștampila OC „CVALIMETRITOT” SRL





FPC "Cheton Grup" SRL Moldova, or. Chisinau, str. A. Doga, 45/2, ap.50

Tel/fax : (373 22) 811-911, e-mail: [cheton@cheton.md](mailto:cheton@cheton.md) c/d 222450201000036

IBAN MD25FT222450201000036498 ,BC "Fincombank" SA, fil. № 2 ,BIC: FTMDMD2X847

c/f 1003600016515 TVA 0602604

Prin Hotarirea Guvernului nr. 226 din 29.02.2008, pentru aprobarea Reglementarii tehnice cu privire la produsele pentru constructii (Monitorul oficial nr. 51-54 din 14.03.2008), produsele enumerate nu necesita certificare:

| DENUMIREA PRODUSULUI                      | POZITIA TARIFARA |
|-------------------------------------------|------------------|
| Super email FARBIS 0,7 L; 2,5 L           | 320890910        |
| Vopsea 3 in 1 HAMMER 0,75 L, 2,5 L        | 320890910        |
| Олифа                                     | 392330101        |
| Эмаль НЦ Gama Color                       | 320890910        |
| Эмаль Palitra, Nova, Coloriks, Gama Color | 320810900        |
| Грунт акриловый для бетона Coloriks       | 320910000        |
| Грунт, грунт 2 в 1 Gama Color, Грунт Nova | 320910000        |
| Лак НЦ, Coloriks, Gama Color              | 320810900        |
| Безир                                     | 390750000        |
| Преобразователь ржавчины                  | 381010000        |
| Жидкое стекло                             | 392330126        |
| Краска масляная Gama Color                | 321000100        |
| Смывка старой краски                      | 290312000        |
| Клей ПВА Gama Color                       | 390512000        |
| Пропитка для дерева Lux Decor             | 320910000        |
| Растворитель Farbis, Coloriks             | 381400100        |
| Уайт – спирт                              | 320810100        |
| Заменитель ацетона                        | 291539300        |
| Термостойкая Coloriks                     | 320810100        |
| Краска масляная                           |                  |

Director FPC Cheton Grup SRL



Zincenco Andrei



ArcelorMittal Hunedoara S.A.  
DJ 687, nr. 4, Cod 331111, Hunedoara-Romania

ArcelorMittal

CERTIFICAT DE INSPECTIE / INSPECTION CERTIFICATE  
SR EN 10204:2005 ( EN 10204:2004 ) 3.1

ArcelorMittal HUNEDOARA S.A:  
  
Quality Inspection & Statistics  
Hunedoara-Romania Cod 331111

Destinatar / Destined to:  
SC Thyssenkrupp Materials Romania

Nr. / No.: 1450083351  
Data / Date 26.04.2023

Adresa/Address: b-dul Basarabiei, 256, 030171, BUCURESTI  
Tara/State: România

Comanda nr. / Order no.: 5104

Vagon/Wagon / Auto/Truck:  
HD49SAM/B548SAM

Standard de marca / Material norm: SR EN 10025-2:2019

Marcaj color:

DOP: AMHU-2/09 CPR-13-1 ; AMHU-2/05 CPR-13-1

Observatii / Remarks:

| Nr.Crt /<br>No.Item | Nr.Sarja /<br>Heat No | Marca /<br>Quality | Produs /<br>Product | Buc. /<br>Pieces | Cantitate /<br>Quantity<br><br>[to] | Lungime /<br>Length<br><br>[mm] | Toleranta la<br>lungime /<br>Tolerance<br>To length<br>[mm] | Incerari mecanice/Mechanical tests |                      |      |                                          |              |            |            |            |                             |  |
|---------------------|-----------------------|--------------------|---------------------|------------------|-------------------------------------|---------------------------------|-------------------------------------------------------------|------------------------------------|----------------------|------|------------------------------------------|--------------|------------|------------|------------|-----------------------------|--|
|                     |                       |                    |                     |                  |                                     |                                 |                                                             | ReH                                | Rm                   | A5   | Incovoiere prin soc / Charpy impact test |              |            |            |            |                             |  |
|                     |                       |                    |                     |                  |                                     |                                 |                                                             | [N/mm <sup>2</sup> ]               | [N/mm <sup>2</sup> ] | [%]  | Tip epruveta /<br>Type of sample         | Temp<br>[°C] | KV1<br>[J] | KV2<br>[J] | KV3<br>[J] | Medie KV /<br>Average<br>KV |  |
| 1                   | 71806                 | S355J2+M           | IPE220              | 12               | 3.820                               | 12100                           | -0 / +100                                                   | 425                                | 548                  | 29,0 | 300/7,5                                  | -20          | 136,0      | 136,0      | 128,0      | 133,3                       |  |
| 2                   | 71805                 | S355J2+M           | IPE220              | 20               | 6.367                               | 12100                           | -0 / +100                                                   | 425                                | 555                  | 28,0 | 300/7,5                                  | -20          | 130,0      | 132,0      | 136,0      | 132,7                       |  |
| 3                   | 71748                 | S275JO+M           | IPE220              | 36               | 11.460                              | 12100                           | -0 / +100                                                   | 328                                | 479                  | 32,0 | 300/7,5                                  | 0            | 70,0       | 76,0       | 78,0       | 74,7                        |  |

Compozitie chimica pe otel lichid/Chemical analysis of the liquid steel [%]

| Nr.crt /<br>No Item | Nr.Sarja /<br>Heat No | C     | Mn    | Si    | S     | P     | Cr    | Ni    | Cu    | Mo    | Ti    | V     | Al    | Sn    | B      | Nb     | N      | O(ppm) | H(ppm) | CEV   |
|---------------------|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|-------|
| 1                   | 71806                 | 0,120 | 1,180 | 0,200 | 0,004 | 0,015 | 0,100 | 0,160 | 0,310 | 0,040 | 0,001 | 0,044 | 0,030 | 0,015 | 0,0002 | 0,0013 | 0,0120 |        |        | 0,385 |
| 2                   | 71805                 | 0,120 | 1,170 | 0,230 | 0,004 | 0,015 | 0,100 | 0,120 | 0,310 | 0,030 | 0,001 | 0,045 | 0,030 | 0,014 | 0,0002 | 0,0013 | 0,0104 |        |        | 0,379 |
| 3                   | 71748                 | 0,140 | 0,560 | 0,170 | 0,024 | 0,016 | 0,140 | 0,160 | 0,300 | 0,040 | 0,000 | 0,003 | 0,002 | 0,012 | 0,0002 | 0,0010 | 0,0095 |        |        | 0,301 |

Utilizare preconizata/Intended uses: Structuri metalice si/sau structuri mixte otel-beton/Metalic structures and/or mixed structures steel-concrete  
Durabilitate/Durability: Compozitie chimica / Chemical analysis  
Sudabilitate/Weldability: CEV  
Substanta reglementata/Regulated substance: Performanta nedeterminata/No performance determined  
Marcaj/Marked: SR EN 10025-1:2005 ( EN 10025-1:2004 )  
Suprafata/Surface: SR EN 10163-3:2005, clasa C, subcl.1 ( EN 10163-3:2004 )  
Dimensiuni/Dimension: SR EN 10365/2017; EN 10365/2017  
Tol. la dim. si forma / Tolerances on dimension and shape: SR EN 10034/1995; EN 10034/1993

Materialul mai sus mentionat nu prezinta radioactivitate  
The above mantioned material has not displayed any radioactivity

Inspectia Calitatii si Statistici/Quality Inspection & Statistics  
Quality Manager:Ileana Cristea Eng.

Intocmit/Elaborate:  
  
CRISTIAN IOAN MICLEAN CIAPA

CE

12/1823

Form.PC-12 rev.5

MINISTERUL SĂNĂTĂȚII AL REPUBLICII MOLDOVA  
МИНИСТЕРСТВО ЗДРАВООХРАНЕНИЯ  
РЕСПУБЛИКИ МОЛДОВА  
AGENȚIA NAȚIONALĂ PENTRU SĂNĂTATE PUBLICĂ  
НАЦИОНАЛЬНОЕ АГЕНТСТВО ОБЩЕСТВЕННОГО  
ЗДОРОВЬЯ

MD-2028, mun. Chișinău, str. Gheorghe Asachi, 67 a  
Tel. + 373 22 574501, fax + 373 22 729725  
IDNO 1018601000021  
e-mail: [office@ansp.gov.md](mailto:office@ansp.gov.md)

DOCUMENTAȚIE MEDICALĂ: Медицинская документация  
FORMULAR: Формы № 303-2 е  
APROBAT DE MS al RM: Утверждена МЗ РМ № 828  
от 31.10.11  
Centrul de Încercări de Laborator acreditat de către Centrul  
Național de Acreditare din Republica Moldova: МОЛДАВ  
Испытательный лабораторный центр аккредитованный  
Национальным Аккредитационным Центром РМ: МОЛДАВ  
Certificat nr. FI-044 din 17.02.2018 valabil până la 16.02.2026

**AVIZ SANITAR**  
**PENTRU PRODUSELE ALIMENTARE ȘI NEALIMENTARE Nr. P-14957/2022**

*Санитарное заключение для пищевых и непищевых продуктов*  
din OT 03 august 2022

**Prin prezentul aviz sanitar se confirmă că producerea, importul, utilizarea și desfacerea produselor / echipamentelor**

*Настоящим санитарным заключением подтверждается что производство, импорт, использование и реализация продукции / оборудования*

GRUND: universal "Supraton Extra", cu penetrare profundă "Tuffuhpuht", antifungie "Supraton Lux Biocid", "Supraton",  
siliconic cu penetrare profundă "Silicon Grund"

**sunt conforme Regulamentului (lor) sanitar (e) / соответствующим санитарному (ым) регламенту (ам)** (se va indica denumirea completă a  
Regulamentului (lor) sanitar (e) / указать полное наименование санитарного (ых) регламента (ов))

SF 38622974-002:2010, Reglementărilor tehnice cu privire la cerințele minime pentru comercializarea produsele  
pentru construcții aprobat prin HG 913/2016

**Organizația-producătoare/importatoare, țara de origine / организация-произв. импортер, страна происхождения**

„SUPRATEN” SA, Republica Moldova

**Destinatarul avizului sanitar / получатель санитарного заключения**

SUPRATEN S.A., Republica Moldova, mun. Chișinău, sec. Riscani, str-la 2 Petricani, 84, bloc. ap. of.

**Temei pentru recunoașterea conformității produselor Regulamentului (lor) sanitar (e) menționat (e) a servit /**

*Основанием для признания продукции указанному (ым) санитарному (ым) регламенту (ам) послужило*

Demers, certificate de conformitate, informații pe produs, raport a încercărilor de laborator nr.51000315 din 01.08.2022  
(a enumera documentele de însoțire, buletinele de analiză / перечислить сопроводительные док., протоколы исследований)

**Caracteristica sanitară a produselor / санитарная характеристика продукции:**

**Parametrii (factorii) / показатели (факторы)**

conform raportului încercărilor de laborator nr.51000315 din 01.08.2022

**Normativul sanitar / санитарный норматив:**

**Domeniu de utilizare / Область применения:**

lucrări de construcții, finisare

**Condițiile necesare de utilizare, depozitare, transportare, măsurile de securitate / Необходимые условия использования, хранения,  
транспортировки, меры безопасности:**

producerea, plasarea pe piață în condițiile respectării legislației în vigoare în Republica Moldova

**AVIZUL SANITAR este valabil pînă la / Санитарное заключение действительно до: 31.08.2025**

**DIRECTORUL AGENȚIEI NAȚIONALE PENTRU SĂNĂTATE PUBLICĂ**

**Nicolae Jelamschi**

Digitally signed by Jelamschi Nicolae  
Date: 2022.08.03 13:47:12 EEST  
Reason: MoldSign Signature  
Location: Moldova



MINISTERUL SĂNĂTĂȚII AL REPUBLICII MOLDOVA  
МИНИСТЕРСТВО ЗДРАВООХРАНЕНИЯ  
РЕСПУБЛИКИ МОЛДОВА  
AGENȚIA NAȚIONALĂ PENTRU SĂNĂTATE PUBLICĂ  
НАЦИОНАЛЬНОЕ АГЕНТСТВО ОБЩЕСТВЕННОГО  
ЗДОРОВЬЯ

MD-2028, mun. Chișinău, str. Gheorghe Asachi, 67 a  
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DOCUMENTAȚIE MEDICALĂ / Медицинская документация  
FORMULAR: Формы: Nr. 303-2/c  
APROBAT DE MS al RM / Утверждена МЗ РМ: Nr. 828  
от 31.10.11  
Centrul de încercări de laborator acreditat de către Centrul  
National de Acreditare din Republica Moldova / МОЛДАВ  
Национальный лабораторный центр аккредитации  
Национальный Акрикционный Центр РМ / МОЛДАВ  
Certificat nr. 145044 din 17.02.2018 valabil până la 17.02.2025

**AVIZ SANITAR**  
**PENTRU PRODUSELE ALIMENTARE ȘI NEALIMENTARE Nr. P-14950/2022**  
*Санитарное заключение для пищевых и непищевых продуктов*  
**din/or 03 august 2022**

**Prin prezentul aviz sanitar se confirmă că producerea, importul, utilizarea și desfacerea produselor / echipamentelor**

*Настоящим санитарным заключением подтверждается что производство, импорт, использование и реализация продукции оборудования*

**GRUND:** cu faianță de cuarț "Gleta siliconată", siliceonic cu nisip de cuarț "Silicort - Quarzgrunt", cu nisip de cuarț "Betohyput", pentru suprafețe neabsorbante "Betokontakt"; GLET acrilic interior "B-62 Satroc", "Satroc", "Meșterul Manole"; TENCUALĂ decorativă "Tink structurat Nic Tina", "Silicon Kratzputz", "Silicon Reibeputz"

**sunt conforme Regulamentului (lor) sanitar (e) / соответствуют санитарному (ым) регламенту (ам)** (se va indica denumirea completă a Regulamentului (lor) sanitar (e) / указать полное наименование санитарного (ых) регламента (ов))

SF 38622974-002:2010, Reglementărilor tehnice cu privire la cerințele minime pentru comercializarea produselor pentru construcții aprobat prin IIG 913 2016

**Organizația-productoare/importatoare, țara de origine / организация-производитель/импортёр, страна происхождения**

„SUPRATEN” SA, Republica Moldova

**Destinatarul avizului sanitar / получатель санитарного заключения**

SUPRATEN S.A., Republica Moldova, mun. Chișinău, sec. Riscani, str-la 2 Petricani, 84, bloc. , ap. of.

**Temei pentru recunoașterea conformității produselor Regulamentului (lor) sanitar (e) menționat (e) a servii / Основанием для признания продукции указанному (ым) санитарному (ым) регламенту (ам) послужило**

Demers, certificate de conformitate, informații pe produs, raport a încercărilor de laborator nr.51000316 din 01.08.2022 (a enumera documentele de însoțire, buletinele de analiză / перечислить сопроводительные док., протоколы анализов)

**Caracteristica sanitară a produselor / санитарная характеристика продукции:**

**Parametrii (factorii) / показатели (факторы)**  
conform raportului încercărilor de laborator nr.51000316 din 01.08.2022

**Normativul sanitar / санитарный норматив**

**Domeniu de utilizare / Область применения:**  
lucrări de construcții, finisare

**Condițiile necesare de utilizare, depozitare, transportare, măsurile de securitate / Необходимые условия использования, хранения, транспортировки, меры безопасности:**  
producerea, plasarea pe piață în condițiile respectării legislației în vigoare în Republica Moldova

**AVIZUL SANITAR este valabil pînă la / Санитарное заключение действительно до: 31.08.2025**

**DIRECTORUL AGENȚIEI NAȚIONALE PENTRU SĂNĂTATE PUBLICĂ**

**Nicolae Jelamschi**

Digitally signed by Nicolae Jelamschi  
Date: 2022.08.03 13:42:31 EEST  
Reason: MoldSign Signature  
Location: Moldova





## AVIZ SANITAR

### PENTRU PRODUSELE ALIMENTARE ȘI NEALIMENTARE Nr. P-14953/2022

*Санитарное заключение для пищевых и непищевых продуктов*

**din/от 03 august 2022**

**Prin prezentul aviz sanitar se confirmă că producerea, importul, utilizarea și desfacerea produselor / echipamentelor**

*Настоящим санитарным заключением подтверждается что производство, ввоз, использование и реализация продукции соответствует:*

VOPSEA: "Euroton Lav", "Snejana Lav", "Snejana", "Eurostil", "Matsatex", "Romanita", "Grădinar", "Relief",  
"Fleksodecor", "Poiana florilor", "Smile Ultrabel", "Normal Ultrabel", "Fasad Extra", LAC sidefiu decorativ "Perla"

**sunt conforme Regulamentului (lor) sanitar (e) / соответствующим санитарному (ым) регламенту (ам) (se va indica denumirea completă a**  
**Regulamentului (lor) sanitar (e) / указать полное наименование санитарного (ых) регламента (ов)).**

SF 38622974-002:2010, Reglementărilor tehnice cu privire la cerințele minime pentru comercializarea produsele  
pentru construcții aprobat prin HG 913/2016

**Organizația-producătoare/importatoare, țara de origine / организация произв. импортер, страна происхождения**

„SUPRATEN” SA, Republica Moldova

**Destinatarul avizului sanitar / получатель санитарного заключения**

SUPRATEN S.A., Republica Moldova, mun. Chișinău, sec. Riscani, str-la 2 Petricani, 84, bloc. , ap. of.

**Temei pentru recunoașterea conformității produselor Regulamentului (lor) sanitar (e) menționat (e) a servit /**

*Основанием для признания продукции указанному (ым) санитарному (ым) регламенту (ам) послужило:*

Demers, certificate de conformitate, informații pe produs, raport a încercărilor de laborator nr.51000318 din 01.08.2022

(a enumera documentele de însoțire, buletinele de analiză / перечислить сопроводительные докум., протоколы анализов)

**Caracteristica sanitară a produselor / санитарная характеристика продукции:**

**Parametrii (factorii) / показатели (факторы)**

conform raportului încercărilor de laborator nr.51000318 din 01.08.2022

**Normativul sanitar / санитарный норматив:**

**Domeniu de utilizare / Область применения:**

lucrări de construcții, finisare

**Condițiile necesare de utilizare, depozitare, transportare, măsurile de securitate / Необходимые условия использования, хранения, транспортировки, меры безопасности:**

producerea, plasarea pe piață în condițiile respectării legislației în vigoare în Republica Moldova

**AVIZUL SANITAR este valabil pînă la / Санитарное заключение действует до: 31.08.2025**

**DIRECTORUL AGENȚIEI NAȚIONALE PENTRU SĂNĂTATE PUBLICĂ**

**Nicolae Jelamschi**

Digitally signed by Nicolae Jelamschi  
Date: 2022.08.03 13:44:26 EEST  
Reason: MoldSign Signature  
Location: Moldova



## AVIZ SANITAR

### PENTRU PRODUSELE ALIMENTARE ȘI NEALIMENTARE Nr. P-14958/2022

*Санитарное заключение для пищевых и непищевых продуктов*

din/or 03 august 2022

Prin prezentul aviz sanitar se confirmă că producerea, importul, utilizarea și desfacerea produselor / echipamentelor

*Настоящим санитарным заключением подтверждается что производство, ввоз, использование и реализация продукции оборудованию*

Produse utilizate în lucrări de construcție – vopsea "Flexsilan", "Aquaecolor", "Lucios", "Metalic"; lac "Brio", "Lazura"; emetice  
"Lastic", adeziv "Bagheta"; membrană "Flexibat 10", "Ghidroizol"; mozaic de cuarț "Quarz System"

sunt conforme Regulamentului (lor) sanitar (e) / соответствующему санитарному (ым) регламенту (ам) (se va indica denumirea completă a  
Regulamentului (lor) sanitar (e) / указать полное наименование санитарного (ых) регламента (ам))

SF 38622974-002:2010, Reglementările tehnice cu privire la cerințele minime pentru comercializarea produsele  
pentru construcții aprobat prin HG 913 2016

Organizația-producătoare/importatoare, țara de origine / организация-производитель/импортёр, страна происхождения

„SUPRATEN” SA, Republica Moldova

Destinatarul avizului sanitar / получатель санитарного заключения

SUPRATEN S.A., Republica Moldova, mun. Chișinău, sec. Riscani, str.-la 2 Petricani, 84, bloc., ap. of.

Temei pentru recunoașterea conformității produselor Regulamentului (lor) sanitar (e) menționat (e) a servit /

*Основанием для признания продукции указанному (ым) санитарному (ым) регламенту (ам) послужило:*

Demers, certificate de conformitate, informații pe produs, rapoarte a încercărilor de laborator nr.51000308 din 28.07.2022,  
nr.51000311 din 29.07.2022

(a enumera documentele de însoțire, buletinele de analiză / перечислить сопроводительные док., протоколы исследований)

Caracteristica sanitară a produselor / санитарная характеристика продукции:

Parametrii (factorii) / показатели (факторы)

Normativul sanitar / санитарный норматив

conform rapoartelor încercărilor de laborator nr.51000308 din 28.07.2022, nr.51000311 din 29.07.2022

Domeniu de utilizare / Область применения:

lucrări de construcții, finisare

Condițiile necesare de utilizare, depozitare, transportare, măsurile de securitate / Необходимые условия использования, хранения,  
транспортировки, меры безопасности:

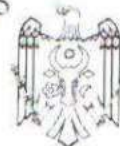
producerea, plasarea pe piață în condițiile respectării legislației în vigoare în Republica Moldova

AVIZUL SANITAR este valabil până la / Санитарное заключение действительно до: 31.08.2025

DIRECTORUL AGENȚIEI NAȚIONALE PENTRU SĂNĂTATE PUBLICĂ

Nicolae Jelamschi

Digitally signed by Jelamschi Nicolae  
Date: 2022.08.03 13:47:47 EEST  
Reason: MoldSign Signature  
Location: Moldova





EN 13984:2013

## Deklaracja właściwości użytkowych

Zgodnie z Załącznikiem Regulacji (EU) No. 305/2011  
Nr P3002DB/2015  
dla produktu

**PRIVATE LABEL DB 0,2 +/-30% Typ A / Eurovent DB 0,2 +/-30% Typ A**

|                                                                  |                                                                                                                                                                                                                                   |
|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Niepowtarzalny kod identyfikacyjny typu wyrobu                | P3002DB/2015                                                                                                                                                                                                                      |
| 2. Zamierzone zastosowanie lub zastosowania                      | Elastyczny wyrób wodochronny do regulacji przenikania pary wodnej                                                                                                                                                                 |
| 3. Producent                                                     | Eurosystem Polska Sp. z o.o. Sp. K.<br>Wiejska 13 46-055 Przywory, Polska<br>VAT PL9372516153                                                                                                                                     |
| 4. Upoważniony przedstawiciel                                    | Nie dotyczy                                                                                                                                                                                                                       |
| 5. System(y) oceny i weryfikacji stałości właściwości użytkowych | System 3                                                                                                                                                                                                                          |
| 6. Norma zharmonizowana. Jednostka lub jednostki notyfikowane    | EN 13984:2013<br>Jednostka notyfikowana nr 1488. Instytut Techniki Budowlanej. 00-611 Warszawa, ul. Filtrowa 1 przeprowadziła badania typu w systemie 3 i wydała sprawozdania z badań nr LH-1307/F/08, LO 1125/08/1, LO 1125/08/2 |



## 7. Deklarowane właściwości użytkowe

| ZASADNICZE CHARAKTERYSTYKI   | ZHARMONIZOWANA<br>SPECYFIKACJA TECHNICZNA | WŁAŚCIWOŚCI UŻYTKOWE                                   |
|------------------------------|-------------------------------------------|--------------------------------------------------------|
| Reakcja na ogień             | EN 13984:2013                             | F                                                      |
| Wodoszczelność               | EN 13984:2013                             | Spełnia wymagania przy 2kPa                            |
| Opór dyfuzyjny               | EN 13984:2013                             | min. $1,2 \times 10^{-11} [(m^2 \cdot s \cdot Pa)/kg]$ |
| Wytrzymałość na uderzenia    | EN 13984:2013                             | NPD                                                    |
| Wytrzymałość łącza           | EN 13984:2013                             | NPD                                                    |
| Wytrzymałość na zerwanie MD  | EN 13984:2013                             | min. 8 MPa                                             |
| Wytrzymałość na zerwanie CD  | EN 13984:2013                             | min. 6 MPa                                             |
| Wydłużenie MD                | EN 13984:2013                             | min. 150%                                              |
| Wydłużenie CD                | EN 13984:2013                             | min. 150%                                              |
| Odporność na rozdzielanie MD | EN 13984:2013                             | min. 40 N                                              |
| Odporność na rozdzielanie CD | EN 13984:2013                             | min. 40 N                                              |
| Trwałość                     |                                           |                                                        |
| Starzenie                    | EN 13984:2013                             | Spełnia wymagania                                      |
| Odporność chemiczna          | EN 13984:2013                             | Spełnia wymagania                                      |
| Substancje szkodliwe         | EN 13984:2013                             | NPD                                                    |

8. Deklaracja: właściwości użytkowe określonego powyżej wyrobu są zgodne z zestawem deklarowanych właściwości użytkowych. Niniejsza deklaracja właściwości użytkowych wydana zostaje zgodnie z rozporządzeniem (EU) nr 305/2011 na wyłączną odpowiedzialność producenta określonego powyżej.

Marcin Świerta  
Prezes Zarządu



Przywory, 02.11.2015 r.

CE

08

EN 13984:2013

DECLARAȚIA DE PERFORMANȚĂ

În conformitate cu Regulamentul PE 305/2011

Nr P3002DB/2015

pentru produs

PRIVATE LABEL DB 0,2 +/-30% Typ A / Eurovent DB 0,2 +/-30% Typ A

|    |                                                                                                   |                                                                                                                                                                                                                           |
|----|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | Cod unic de indentificare a tipului de produs:                                                    | Nr P3002DB/2015                                                                                                                                                                                                           |
| 2. | Utilizarea sau utilizările prevăzute                                                              | Produs hidroizolant flexibil pentru reglare transmisia vaporilor de apă                                                                                                                                                   |
| 3. | Fabricantul                                                                                       | Eurosystem Polska Sp. z o.o. Sp. K., Wiejska 13 46-055 Przywory, Polska, VAT PL9372516153                                                                                                                                 |
| 4. | Reprezentant autorizat:                                                                           | Nu se aplică                                                                                                                                                                                                              |
| 5. | Sistem (e) de evaluare și verificare a constanței performanței                                    | Systema 3                                                                                                                                                                                                                 |
| 6. | Standard Armonizat                                                                                | EN 13956:2012                                                                                                                                                                                                             |
|    | Unitate sau organismele notificate sistem (e) de evaluare și verificare a constanței performanței | Organismul notificat nr. 1488. Institutul de Tehnologie Construcție. 00-611 Varșovia, ul. Filtrowa 1 a efectuat teste de tip în sistemul 3 și a emis rapoarte de testare nr. LH-1307 / F / 08, LO 1125/08/1, LO 1125/08/2 |
| 7. | Performanța declarată:                                                                            |                                                                                                                                                                                                                           |
|    | CARACTERISTICI ESENȚIALE                                                                          | Specificațiile tehnice armonizate                                                                                                                                                                                         |
|    |                                                                                                   | PERFORMANȚĂ                                                                                                                                                                                                               |
|    | Reacție la foc                                                                                    | EN 13984:2013                                                                                                                                                                                                             |
|    | Rezistent la apă                                                                                  | EN 13984:2013                                                                                                                                                                                                             |
|    | Rezistența la difuzie                                                                             | EN 13984:2013                                                                                                                                                                                                             |
|    | Rezistența la impact                                                                              | EN 13984:2013                                                                                                                                                                                                             |
|    | Rezistența legăturii                                                                              | EN 13984:2013                                                                                                                                                                                                             |
|    | Rezistență la rupere MD                                                                           | EN 13984:2013                                                                                                                                                                                                             |
|    | Rezistență la rupere CD                                                                           | EN 13984:2013                                                                                                                                                                                                             |
|    | Alungirea MD                                                                                      | EN 13984:2013                                                                                                                                                                                                             |
|    | Alungirea CD                                                                                      | EN 13984:2013                                                                                                                                                                                                             |
|    | Rezistență la rupere MD                                                                           | EN 13984:2013                                                                                                                                                                                                             |
|    | Rezistență la rupere CD                                                                           | EN 13984:2013                                                                                                                                                                                                             |
|    | Durabilitate                                                                                      |                                                                                                                                                                                                                           |
|    | Îmbătrânește                                                                                      | EN 13984:2013                                                                                                                                                                                                             |
|    | Rezistență chimică                                                                                | EN 13984:2013                                                                                                                                                                                                             |
|    | Substanțe dăunătoare                                                                              | EN 13984:2013                                                                                                                                                                                                             |

NPD=Nicio Performanță Determinată

Performanța produsului identificat mai sus este în conformitate cu setul de performanțe declarate. Această declarație de performanță este emisă, în conformitate cu Regulamentul (UE) nr. 305/2011, sub responsabilitatea exclusivă a producătorului identificat mai sus.

Marcin Świerta

Președinte al Consiliului

Przywory, 02.11.2015 r.

Declarația este disponibilă pe site: <https://eurovent.de/db-1>

Documentul este complet tradus de AGLICON S.R.L.



OCpr-018

ORGANISMUL DE CERTIFICARE  
PRODUSE ICSP "INMACOMPROIECT" SRL

MD 2015, mun. Chișinău, str. Sarmizegetusa, 15, tel: +37322522066



## CERTIFICAT DE CONFORMITATE a controlului producției în fabrică

OCpr-018 11A 1669-22

BETOANE

Clase: C8/10 X0; C12/15 X0, C16/20 X0, C20/25 XC1, C25/30 XC2 XF2,  
C30/37 XC3 XF3

Domeniu de utilizare: fabricarea structurilor turnate "in situ", structurilor prefabricate,  
elementelor de structură, prefabricate pentru clădiri și structuri de geniu civil.

Fabricate de:

**S.R.L. "BETACON PLUS"**

Republica Moldova, UTA Găgăuzia, mun. Comrat, str. Lenin, 2

Acest certificat atestă:

îndeplinirea tuturor prevederilor privind controlul producției specificate în articol 9  
a standardului

SM EN 206:2013+A2:2021, Cod Practic CP H.04.04:2018

Schema de certificare a produsului:

Schema 3 (schema 3 din SM SR EN ISO/CEI 17067:2014)

"Selecția, determinarea caracteristicilor, prin încercări, inspecție, evaluarea proceselor, analiza  
prin examinarea dovezilor de conformitate obținute în etapa de determinare, decizia referitoare la  
certificare, acordarea, menținerea, extinderea, restringerea, suspendarea, retragerea certificării,  
emiterea certificatului. Supravegherea periodică o dată pe an și prelevarea probelor punctuale din  
fabrică pentru încercările din producția curentă o dată la 6 luni."

Valabilitatea certificatului este condiționată de efectuarea supravegherii confirmată prin  
rapoartele rezultate și de reevaluarea completă la recertificarea acestuia înainte de expirarea  
perioadei de valabilitate (3 ani).

Certificatul poate fi suspendat sau retras, dacă se constată că nu se mențin condițiile în baza  
cărora a fost emis.

Certificatul rămâne valabil dacă nu sunt modificate semnificativ: documentele de referință,  
metodele de evaluare a condițiilor de fabricație și caracteristicile declarate.

Valabilitatea certificatului este condiționată de efectuarea supravegheților anuale la data de:

09-  
2023

09-  
2024

Data emiterii: 23.09.2022

Data expirării: 23.09.2025

№ 00191

Conducătorul organismului

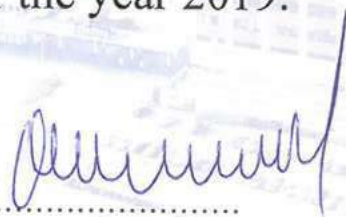


E. Oprea



# CERTIFICATE

We hereby declare that company  
**AGLICON S.R.L., Chisinau, Moldova**  
is fully authorized as our official partner,  
to sell and install the **FATRAFOL** waterproofing system,  
produced by FATRA, J.C. TRIDA TOMASE BATI 1541,  
763 61 NPAJEDLA, CZECH REPUBLIC,  
for the year 2019.



.....  
Ing. Pavel Čechmánek  
Managing Director  
Fatra, a.s.



# CERTIFICAT

DE VERIFICARE A ASIGURĂRII CONTROLULUI PRODUCȚIEI ÎN FABRICĂ

Numărul: CV-032-2021

**ADEZIVI PENTRU SISTEME TERMOIZOLANTE,  
IZOPOL, IZOMIN UNIVERSAL, BAZALT, CLASS POLISTIROL, POLIIZOL.**

**Utilizare:** Pentru plăci la exterior și interior, pentru sisteme termoizolante.

Produs de:

**"SUPRATEN" S.A.,**

**str. Petricani, 84, mun. Chișinău, Republica Moldova.**

Loc de producție:

**str. Transnistria, 5/1, mun. Chișinău, Republica Moldova.**

Produsele sunt supuse de către producător încercărilor inițiale de tip pentru produs și unui control al procesului de producție care cuprinde toate măsurile necesare pentru îndeplinirea și menținerea cerințelor specificate în documentele de referință. OC Certmatcon a efectuat verificarea asigurării controlului producției în fabrică de către producător conform sistemului 4, a evaluat rapoartele privind încercările inițiale de tip și va efectua supravegherea continuă a procesului de producție. Acest certificat atestă îndeplinirea prevederilor privind asigurarea controlului producției în fabrică descrise în:

**ETM Nr. 02/04-011:2021**

Acest certificat a fost emis prima dată la data de 07.06.2021 și va rămâne valabil până la data de 06.06.2024, atât timp cât standardul armonizat, produsul pentru construcții, metodele de evaluare a constanței performanței și condițiile de producție în fabrică nu sunt modificate esențial.

Acest certificat poate fi suspendat sau retras dacă se constată că nu se mențin condițiile în baza cărora a fost emis.



**Director General**

**Ion PUHA**

Certificat valabil doar cu condiția vizării anuale.



# CERTIFICAT

## PENTRU CONTROLUL PRODUCȚIEI ÎN FABRICĂ

**Numărul: CPF-141-2021**

În conformitate cu Hotărârea de Guvern Nr. 913 din 25.07.2016 privind aprobarea Reglementării tehnice cu privire la cerințele minime pentru comercializarea produselor pentru construcții, acest certificat se aplică pentru:

### **Placă metalică autoportantă**

**Utilizare:** pentru învelitoare de acoperiș,  
placări la exterior și căptușiri la interior.

Produs de:

**"DASTERUM" S.R.L.,**

**str. Lunca Bâcului, 29, mun. Chișinău, Republica Moldova**

**Loc de producție: str. Lunca Bâcului, 29, mun. Chișinău, Republica Moldova**

Produsele sunt supuse de către producător încercărilor inițiale de tip pentru produs și unui control al procesului de producție care cuprinde toate măsurile necesare pentru îndeplinirea și menținerea cerințelor specificate în documentele de referință. OC Certmatcon a efectuat inspecția inițială a procesului de producție, a evaluat rapoartele privind încercările de tip și va efectua supravegherea continuă a procesului de producție. Acest certificat atestă îndeplinirea prevederilor privind evaluarea și verificarea constanței performanței descrise în anexa ZA a standardului:

**SM SR EN 14782:2010**

**Sistem aplicabil: 4**

Acest certificat a fost emis prima dată la data de 23.03.2021 și va rămâne valabil până la data de 22.03.2024, atât timp cât standardul armonizat, produsul pentru construcții, metodele de evaluare a constanței performanței și condițiile de producție în fabrică nu sunt modificate esențial.

Acest certificat poate fi suspendat sau retras dacă se constată că nu se mențin condițiile în baza cărora a fost emis.

de vizat  
până în  
MARTIE  
2022

de vizat  
până în  
MARTIE  
2023



**Director General**

**Ion PUHA**

**Certificat valabil doar cu condiția vizării anuale.**



# CERTIFICAT

**DE VERIFICARE A ASIGURĂRII CONTROLULUI PRODUCȚIEI ÎN FABRICĂ**

**Numărul: CV-030-2021**

**TENCUIELI PE BAZĂ DE IPSOS PENTRU CONSTRUCȚII,  
EUROFIN, FINITO, GȘM-15.**

**Utilizare:** La tencuirea și gletuirea pereților și plafoanelor la interiorul clădirilor.

Produs de:

**"SUPRATEN" S.A.,**

**str. Petricani, 84, mun. Chișinău, Republica Moldova.**

Loc de producție:

**str. Meșterul Manole, 9, mun. Chișinău, Republica Moldova.**

Produsele sunt supuse de către producător încercărilor inițiale de tip pentru produs și unui control al procesului de producție care cuprinde toate măsurile necesare pentru îndeplinirea și menținerea cerințelor specificate în documentele de referință. OC Certmatcon a efectuat verificarea asigurării controlului producției în fabrică de către producător conform sistemului 4, a evaluat rapoartele privind încercările inițiale de tip și va efectua supravegherea continuă a procesului de producție. Acest certificat atestă îndeplinirea prevederilor privind asigurarea controlului producției în fabrică descrise în:

**SM SR EN 13279-1:2010**

Acest certificat a fost emis prima dată la data de 07.06.2021 și va rămâne valabil până la data de 06.06.2024, atât timp cât standardul armonizat, produsul pentru construcții, metodele de evaluare a constanței performanței și condițiile de producție în fabrică nu sunt modificate esențial.

Acest certificat poate fi suspendat sau retras dacă se constată că nu se mențin condițiile în baza cărora a fost emis.



**Director General**

**Ion PUHA**

**Certificat valabil doar cu condiția vizării anuale.**



# CERTIFICAT

**DE VERIFICARE A ASIGURĂRII CONTROLULUI PRODUCȚIEI ÎN FABRICĂ**  
**Numărul: CV-018-2021**

**Mortare de rosturi pentru plăci și dale ceramice,  
FUGA ALB, FUGA GRI, FUGANMERTEL**

**Utilizare:** Pentru plăci și dale, pentru aplicări la exterior și interior, pe pereți și pardoseli.

Produs de:

**"SUPRATEN" S.A..**

**str. Petricani, 84, mun. Chişinău, Republica Moldova.**

Loc de producție:

**str. Transnistria, 5/1, mun. Chişinău, Republica Moldova.**

**str. Meșterul Manole, 9, mun. Chișinău, Republica Moldova.**

Produsele sunt supuse de către producător încercărilor inițiale de tip pentru produs și unui control al procesului de producție care cuprinde toate măsurile necesare pentru îndeplinirea și menținerea cerințelor specificate în documentele de referință. OC Certmatcon a efectuat verificarea asigurării controlului producției în fabrică de către producător conform sistemului 4, a evaluat rapoartele privind încercările inițiale de tip și va efectua supravegherea continuă a procesului de producție. Acest certificat atestă îndeplinirea prevederilor privind asigurarea controlului producției în fabrică descrise în:

SM SR EN 13888:2012

Acest certificat a fost emis prima dată la data de 04.05.2021 și va rămâne valabil până la data de 03.05.2024, atâ timp cât standardul armonizat, produsul pentru construcții, metodele de evaluare a constanței performanței și condițiile de producție în fabrică nu sunt modificate esențial.

Acest certificat poate fi suspendat sau retras dacă se constată că nu se mențin condițiile în baza cărora a fost emis.

MINISTERUL SĂNĂTĂȚII AL REPUBLICII MOLDOVA  
МИНИСТЕРСТВО ЗДРАВООХРАНЕНИЯ  
РЕСПУБЛИКИ МОЛДОВА  
AGENȚIA NAȚIONALĂ PENTRU SĂNĂTATE PUBLICĂ  
НАЦИОНАЛЬНОЕ АГЕНТСТВО ОБЩЕСТВЕННОГО  
ЗДОРОВЬЯ  
MD-2028, mun. Chișinău, str. Gheorghe. Asachi, 67 a  
Tel. + 373 22 574501, fax + 373 22 729725  
IDNO 1018601000021  
e-mail: [office@ansp.gov.md](mailto:office@ansp.gov.md)

DOCUMENTAȚIE MEDICALĂ/ Медицинская документация  
FORMULAR/ Форма Nr. 303-2/e  
APROBAT DE MS al RM / Утверждена МЗ РМ Nr. 828  
от 31.10.11  
Centrul de încercări de laborator acreditat de către Centrul  
Național de Acreditare din Republica Moldova MOLDAC  
Испытательный лабораторный центр аккредитованный  
Национальным Аккредитационным Центром РМ MOLDAC  
Certificat nr. LÎ-044 din 17.02.2018 valabil până la 16.02.2026

**AVIZ SANITAR**  
**PENTRU PRODUSELE ALIMENTARE ȘI NEALIMENTARE Nr. P-16819/2023**  
*Санитарное заключение для пищевых и непищевых продуктов*  
**din/от 24 martie 2023**

**Prin prezentul aviz sanitar se confirmă că producerea, importul, utilizarea și desfacerea produselor / echipamentelor**  
*Настоящим санитарным заключением подтверждается что производство, ввоз, использование и реализация продукции / оборудования*  
**LAC NȚ-218, EMAIL NȚ-132**

**sunt conforme Regulamentului (lor) sanitar (e) / соответствуют санитарному (ым) регламенту (ам) (se va indica denumirea completă a**  
**Regulamentului (lor) sanitar (e) / указать полное наименование санитарного (ых) регламента (ов))**  
**Reglementărilor tehnice cu privire la produsele pentru construcții aprobate prin HG 913/2016**

**Organizația-producătoare/importatoare, țara de origine / организация произв./импортер, страна происхождения**  
**Federația Rusă**

**Destinatarul avizului sanitar / получатель санитарного заключения**  
**F.P.C. CHETON GRUP S.R.L. , Republica Moldova, mun. Chișinău, sec. Botanica, șos. Muncești, 121/1**

**Temei pentru recunoașterea conformității produselor Regulamentului (lor) sanitar (e) menționat (e) a servit /**  
*Основанием для признания продукции указанному (ым) санитарному (ым) регламенту (ам) послужило*  
**Demers, contract nr.91 din 09/02.2017, facturi, rapoarte de analiză, specificație tehnică și de securitate, pașaport de**  
**inofensivitate, aviz sanitar nr.P-7277/2020 din 25.09.2020, rapoarte a încercărilor de laborator nr.51006532 din 15.03.2023,**  
**nr.51006533 din 20.03.2023**  
*(a enumera documentele de însoțire, buletinele de analiză / перечислить сопроводительные док., протоколы исслед.)*

**Caracteristica sanitară a produselor / санитарная характеристика продукции:**  
**Parametrii (factorii) / показатели (факторы)** **Normativul sanitar / санитарный норматив**  
conform rapoartelor încercărilor de laborator nr.51006532 din 15.03.2023, nr.51006533 din 20.03.2023

**Domeniu de utilizare / Область применения:**  
**lucrări de construcție**

**Condițiile necesare de utilizare, depozitare, transportare, măsurile de securitate / Необходимые условия использования, хранения,**  
**транспортировки, меры безопасности:**  
**plasarea pe piață în condițiile respectării legislației în vigoare în Republica Moldova**

**AVIZUL SANITAR este valabil până la / Санитарное заключение действительно до: 31.03.2024**  
**DIRECTORUL AGENȚIEI NAȚIONALE PENTRU SĂNĂTATE PUBLICĂ**

**Nicolae Jelamschi**

*Digitally signed by Nicolae Jelamschi*  
Date: 2023.03.24 10:49:34 EET  
Reason: MoldSign Signature  
Location: Moldova





# CERTIFICAT

## DE CONFORMITATE A CONTROLULUI PRODUCȚIEI ÎN FABRICĂ

Numărul: CPF-156-2021

În conformitate cu Hotărârea de Guvern Nr. 913 din 25.07.2016 privind aprobarea Reglementării tehnice cu privire la cerințele minime pentru comercializarea produselor pentru construcții, acest certificat se aplică pentru:

**Mortare de zidărie,  
realizate industrial pe bază de ciment,  
pentru aplicarea în pereți de zidărie, coloane și pereți despărțitori,  
marca comercială ZIDAR.**

Produs de:

**"SUPRATEN" S.A.,**

**str. Petricani, 84, mun. Chișinău, Republica Moldova.**

**Loc de producție: str. Transnistria, 5/1, mun. Chișinău, Republica Moldova.**

Acest certificat atestă îndeplinirea prevederilor privind evaluarea și verificarea constanței performanței descrise în anexa ZA a standardului

**SM EN 998-2:2017**

conform sistemului 2+, și controlul producției în fabrică (CPF) este evaluat ca fiind în conformitate cu cerințele aplicabile.

Acest certificat a fost emis prima dată la data de 20.04.2021 și va rămâne valabil până la data de 19.04.2024, atât timp cât standardul armonizat, produsul pentru construcții, metodele de evaluare a constanței performanței și condițiile de producție în fabrică nu sunt modificate esențial.

Acest certificat poate fi suspendat sau retras dacă se constată că nu se mențin condițiile în baza cărora a fost emis.



**Director General**

**Ion PUHA**

**Certificat valabil doar cu condiția vizării anuale.**





**LETRINA S.A.**  
CERTIFICATION BODY

Certificate  
Holder /  
Притежател на  
сертификата:

**VIAS LTD**  
**ВИАС ЕООД**

68A Rishki prohod Blvd., 9700 Shumen, BULGARIA  
бул. Ришки проход 68А, 9700 Шумен, БЪЛГАРИЯ

Scope / Обхват:

Production of PVC profiles for doors and windows.  
Production of Al profiles  
Производство на PVC профили за врати и прозорци.  
Производство на Al профили

Standard /  
Стандарт:

**ISO 9001:2015**

The Certification Body **LETRINA S.A.** certifies that the Quality Management System of the above company has been assessed and found to conform with the requirements of the aforementioned standard

Сертифициращият орган **LETRINA S.A.** удостоверява, че Системата за управление на качеството на горепосоченото дружество е оценена и е установено съответствие с изискванията на гореспоменатия стандарт

Certificate/  
Сертификат  
No:

**B 1401042**

First Issued on:  
Issued on/ Издаден на:  
Valid until/ Валиден до:

06/08/2015  
20/07/2018  
05/08/2021



MS Certification  
No of Certificate 12 - 5



I. Bertsatos  
Certification Division Director /  
Директор отдел сертификации





## Dichiarazione CE di Conformità CE Declaration of Conformity

La Società GLG Porte Industriali Group Srl dichiara, sotto la propria responsabilità, che il prodotto

Declares, under its own responsibility, that the product

Modello / Model

**"ROLLIGO"**

Prodotto / Product

**Porta ad Avvolgimento Rapido**  
High speed roll up door

Matricola / Serial Number

**A23-**

Anno / Year

**2023**

Con livelli di prestazione come dichiarati nella DoP è in accordo con le seguenti direttive :

With performance level as declared in DoP it is compliant with the following directive :

- **direttiva macchine / Machinery Directive 2006/42/EG**
- **direttiva bassa tensione / Low Voltage Directive 2014/35/UE**
- **direttiva per compatibilità elettromagnetica / Electromagnetic Compatibility Directive 2014/30/UE**

Norme Europee armonizzate applicate :

Harmonized European standards applied :

**EN13241-1 EN61000-6-2 EN61000-6-3 EN60335-1 EN60204-1**

Certificato di esame di Tipo emesso da organismo notificato :

EC type examination certificate issued by notified competent body :

Organismo notificato / Competent Body

CSI S.p.A. Reg. N°0497

Certificato / Certificate

DE/368/05

Data: 01/01/2023

Date:

Nome, cognome e posizione dei firmatari:

Name, surname and position of the signatory

Firma

Fabio MURARI

Signature

Amministratore unico

**GLG Porte Industriali Group s.r.l.**  
V.le Italia, 15 - 28010 CALTIGNAGA (NO)  
Tel. 0321.437913  
Partita IVA/C.F. 02687590030



Certificato numero / Certificate number

DE/368

**CERTIFICATO DI ESAME DEL TIPO**  
**CERTIFICATE OF TYPE EXAMINATION**

Visti i Rapporti di Prova / Referring to the Test Reports  
n. DC06/191F05 del / dated 14/11/2005

si dichiara che il Fabbrikante/we declare that the Manufacturer

**GLG PORTE INDUSTRIALI SRL**  
**Viale Italia, 15 - 28010 CALTIGNAGA (NO) - ITALY**

ha richiesto sui provini da lui stesso campionati e denominati  
has requested on the specimen sampled by himself and named

**Porta ad avvolgimento rapido non bilanciata**  
*Not-balanced high speed rolling door*  
**Mod. ROLLIGO**

le prove di tipo secondo la norma EN 13241:2003+A2:2016, in conformità ai punti richiesti dal Fabbrikante stesso e indicati nell'Allegato A del presente certificato, secondo il Sistema di valutazione e verifica della costanza della prestazione 3 (tre) - Allegato V del Regolamento (UE) n. 305/2011.  
the type testing according to EN 13241:2003+A2:2016 in compliance with the points required by the Manufacturer himself and listed in Annex A of this certificate, according to the System of assessment and verification of constancy of performance 3 (three) - Annex V of the Regulation (EU) n. 305/2011.

I risultati delle prove eseguite sul campione sono riportati nell'Allegato A  
The results of the tests on the sample are reported in the Annex A

Prima emissione / First issue: 16/11/2005  
Ultima emissione / Last issue: 25/02/2020  
Scadenza / Expiring: 15/11/2025

Ing. P. Fumagalli  
B.U. Prodotto/Product





**Dichiarazione di prestazione**  
\_\_\_\_\_ - 2023

**Modello**  
Rolligo

**Anno di apposizione del marchio**  
2023

**Riferimento interno commessa**  
\_\_\_\_\_

**Impiego previsto**  
Prodotto destinato per ingressi di tipo industriale e commerciale con uso intenso

**Produttore**  
GLG Porte Industriali Group Srl, Viale Italia 15, 28010 Caltignaga (NO)

**Sistema di attestazione**  
3

**Nome e numero di identificazione dell'organismo notificato**  
CSI S.p.A. N°0497

**Prestazione dichiarata come da certificato N° DE/368/05**

|                                                              |          |
|--------------------------------------------------------------|----------|
| 4.2.9 Rilascio di sostanze pericolose / Dangerous substances | Conforme |
| 4.2.8 Sicurezza aperture / Safe opening                      | Conforme |
| 4.3.3 Forze di funzionamento / Operating forces              | Conforme |
| 4.4.3 Resistenza al carico del vento / Wind Load             | Classe 1 |

Data 01/01/ 2023

  
**GLG Porte Industriali Group s.r.l.**  
**V.le Italia, 15 - 28010 CALTIGNAGA (NO)**  
**Tel. 0321 437913**  
**Partita IVA/C.F. 02687590030**



## DECLARATION OF PERFORMANCE

Reference № VV\_2016-02-22

1. Unique identification code of the product: **Al profiles for window and door production- opening system with thermal break TBO 55**

2. Type, serial number or other element enabling the construction product to be identified in accordance with Article 11 (4):

**VV\_2016\_VAS\_TBO55**

3. Intended use or uses of the construction product in accordance with the applicable harmonized specification as foreseen by the manufacturer:

**Aluminium profiles for window and door production**

4. Name, registered trade name or registered trademark and manufacturer's contact address as required by Article 11 (5):

**VIVA ALUMINIUM SYSTEMS  
(AL profiles system TBO 55)**

**VIAS LTD, 9700 Shumen, 68 A Rishki prohod boulevard**

5. Not applicable.

6. System or systems for assessment and verification of constancy of implementation of the construction product according to Annex ZA of BDS EN 14351-1: 2006 + A1: 2010 / NA: 2015:

**System 3**

7. In the case of a declaration of performance concerning a construction product covered by a harmonized standard:

**Initial Type Test Protocol No. ITT-15.28 / 28.01.2016 issued by NISI Ltd. Sofia, Notified Testing Laboratory, NB 2032 Identification Number from the European Commission Register and MRDPW Permit No. CPD 10-NB 2032 and Certified Quality Management System Certificate B 1401042 of 20.07.2018 - Accredited certification body - LETRINA S.A., MS Certification number ESYD, No. of Certificate 12-5.**

**The product is subject to factory production control according to EN 14351-1.**

**VV\_2016-02-22**



8. Not applicable.

9. Declared performance:

| Essential characteristics      | Exploitation indicators                    | Harmonized technical specification               |
|--------------------------------|--------------------------------------------|--------------------------------------------------|
| Water tightness                | Class 9A, 7B                               | BDS EN 1027:2003<br>BDS EN 12208:2003            |
| Wind resistance                | Class C2                                   | BDS EN 12211:2003<br>BDS EN 12210:2003           |
| Load- bearing capacity devices | Class 4                                    | BDS EN 14609:2005<br>BDS EN 13115:2004           |
| Airborne noise isolation       | $R_w (C; C_{tr}) = 37 (-1; -2) \text{ dB}$ | BDS EN ISO 10140-2:2010<br>BDS EN ISO 717-1:2013 |
| Thermal transmittance          | $U_w = 0.914 \text{ W/(m}^2\text{.K)}$     | BDS EN 12567-1                                   |
| Air permeability               | Class 4                                    | BDS EN 1026:2003 и<br>BDS EN 12207:2003          |

Where, in accordance with Articles 37 or 38, specific technical documentation has been used, the requirements of which correspond to the product:

**Not applicable.**

10. The performance data of the products referred to in points 1 and 2 corresponds to the declared performance in point 9.

This declaration of performance is issued entirely under the responsibility of the manufacturer referred to in point 4.

Signed for and on behalf of the manufacturer by:



Shumen, 21.07.2018  
(place and date of issue)

Vesko Vasilev: .....  
(General manager)

## Intensive course for RENOLIT AKORPLAN PVC-P roofing membrane installers

*RENOLIT WATERPROOFING certifies that*

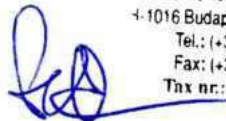
*Mr. Igor Emelin*

*From the Company: AGLICON SRL (Rep. of Moldova)*

*has attended and assimilated all the course subjects imparted in the intensive RENOLIT  
course for the correct installation of PVC roofing membranes at our training center.  
We consider him as a CERTIFIED INSTALLER of our roof waterproofing membranes.*

Sant Celoni (Barcelona), from 12<sup>th</sup> to 16<sup>th</sup> of October, 2018.

RENOLIT  
ALKORPLAN



Renolit Hungary LLC  
+36-1016 Budapest, Hegyalja út 7-13.  
Tel.: (+36-1) 457 8163  
Fax: (+36-1) 457 8160  
Tax nr.: HU: 13525606

**Ferenc Szabó**  
Course instructor



СЕРТИФІКАТ ЯКОСТІ № 5-152/2

ТОВ "ДМЗ КОМІНІТЕТ"

Виробник: 49023, м. Дніпро, вул. Яценківська, 7

Вантажоодержувач: ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ "МЕТІНВЕСТ-СМІЛ"

Дата: 13.03.2023

Машина №

BE3781ET

Заказ № 09/154-2022

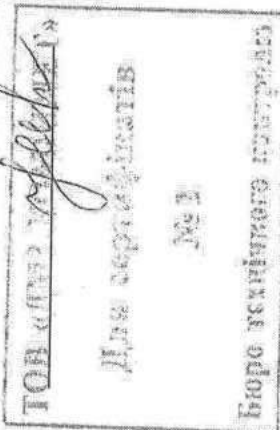
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|                                                               |          |       |             |          |      | Діаметр     | Товщина | Довж. |          |                |            | C                 | Mn | Si  | S  | P  | Se      | Границя плинності НМм2 | Границя міцності з'єднання НМм2 | Видовження, % | Границя міцності з'єднання НМм2 | Усадка в'язкість КОВ     | Наслідки мех. старіння | Споживання | Роздана | Згин | Неруйнівний контроль, % | Гідровипробування, % | Р. МПа, 5 сек |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                               |          |       |             |          |      |             |         |       |          |                |            |                   |    |     |    |    |         |                        |                                 |               |                                 |                          |                        |            |         |      |                         |                      |               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                               |          |       |             |          |      |             |         |       |          |                |            |                   |    |     |    |    |         |                        |                                 |               |                                 |                          |                        |            |         |      |                         |                      |               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Найменування продукції: Труби сталеві електрозварні профільні |          |       |             |          |      |             |         |       |          |                |            |                   |    |     |    |    |         |                        |                                 |               |                                 |                          |                        |            |         |      |                         |                      |               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| НД: ДСТУ 8940:2019                                            |          |       |             |          |      |             |         |       |          |                |            |                   |    |     |    |    |         |                        |                                 |               |                                 |                          |                        |            |         |      |                         |                      |               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 402530801                                                     | 510267   | B     | ЗПС         | 723083   |      | 100x100     | 5       | 12    | 4.462    | 25             | 300        | 19                | 37 | 1.9 | 41 | 23 | 412/417 |                        | 38/38                           |               |                                 |                          |                        |            |         |      |                         |                      |               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Вказано у сертифікаті продукція захищеною точністю виготовлення, без термообробки, виготовлена високоміцностним зварюванням з одним подовженням швом та відповідає діючим в Україні нормативним документам. Контроль розмірів і якості поверхні проводять з застосуванням методик статистичного контролю на 5% труб (але не менше ніж 5 труб від партії). Неруйнівний контроль з'єднання та за всім периметром труб, метод ET, виконаний.

Підпис експерта  
Штамп експерта





СЕРТИФІКАТ ВИПРОБУВАНЬ № 5-83/1 від 05.12.2022  
INSPECTION CERTIFICATE  
(EN 10204 - 3.1)



|                                                                                                                                                        |                        |                            |                                                      |                        |                   |                                         |                                  |                                     |                                          |              |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------------|------------------------------------------------------|------------------------|-------------------|-----------------------------------------|----------------------------------|-------------------------------------|------------------------------------------|--------------|--|
| Виробник:<br>Producer:<br><br><b>ТОВ "ДМЗ КОМІНМЕТ"</b><br><b>LLC "DMZ KOMINMET"</b><br><b>7, Yakhnenkivska St. 49023</b><br><b>Dnipro, Ukraine</b>    |                        |                            | Контракт №<br>Contract                               |                        | 09/154-2022       |                                         | Дата<br>Date                     |                                     | 21.04.2022                               |              |  |
|                                                                                                                                                        |                        |                            | Доповнення до контракту:<br>Addendum to the contract |                        |                   |                                         |                                  |                                     |                                          |              |  |
| Споживач, адреса, країна:<br>Consumer, address, country:<br><br><b>Метінвест-СМЦ ТОВ</b><br><b>01010, м.Київ, вул.Острозьких Князів, Будинок № 8</b>   |                        |                            |                                                      |                        |                   |                                         |                                  |                                     |                                          |              |  |
| Дата відвантаження<br>Ship Date                                                                                                                        |                        | 23.02                      |                                                      | 2023                   |                   | Замовлення №<br>Order                   |                                  | 000000880                           |                                          | Дата<br>Date |  |
| Машини №<br>Carriage                                                                                                                                   |                        |                            | AX3561MO                                             |                        |                   |                                         |                                  |                                     |                                          |              |  |
| Найменування продукції<br>Discription of goods                                                                                                         |                        |                            | Стандарт<br>Standart                                 |                        |                   | Вид вантаж.<br>місця<br>Type of package |                                  |                                     | Кіл-сть<br>місць<br>Quantity of packages |              |  |
| Порожністі зварні профілі з конструкційних сталей<br>холодно-виготовлені профільні<br>Cold formed welded structural hollow sections of non-alloy steel |                        |                            | DIN EN 10219-1:2006, DIN EN 10219-2:2019             |                        |                   | Bundles                                 |                                  |                                     | 2                                        |              |  |
| Номер партії<br>Lot №                                                                                                                                  | Номер плавки<br>Heat № | Марка сталі<br>Steel grade | Розміри, мм<br>Dimensions, mm                        |                        |                   | Кіл. труб<br>од.<br>Q-ty of pipes, pcs  | Кіл. метрів<br>Q-ty of meters, m | Кіл-сть пакетів<br>Q-ty of packages | Маса, т.<br>Mass, mt                     |              |  |
|                                                                                                                                                        |                        |                            | Діаметр<br>O.D. of I.D.                              | Товщина стінки<br>W.T. | Довжина<br>Length |                                         |                                  |                                     | Нetto                                    |              |  |
| 1                                                                                                                                                      | 121708                 | S235JRH                    | 180x180                                              | 5,00                   | 12 000            | 18                                      | 216                              | 2                                   | 6,001                                    |              |  |
| Разом :                                                                                                                                                |                        |                            |                                                      |                        |                   | 18                                      | 216                              | 2                                   | 6,001                                    |              |  |
| Всього :                                                                                                                                               |                        |                            |                                                      |                        |                   | 18                                      | 216                              | 2                                   | 6,001                                    |              |  |

Продовження дивись з оборотної сторони PTO







## СЕРТИФІКАТ ЯКОСТІ / QUALITY CERTIFICATE

№ 176 від 25.01.2023 / date 25.01.2023

| Виробник: Україна<br>ТЗ "Трубоасталь" ПрАТ<br>тел. +38 (04142) 3-22-22<br>Producer: Ukraine, PJSC "Trubostal pipe plant"<br>11500, Zhitomir region, Korosten, Shatryshchanska Str., 65<br>tel. +38 (04142) 3-22-22 |                |                            |                                                                                                                                                   |                        |                   |                                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------------|-----------------------------------|
| Замовник / Customer<br>Метінвест-СМЦ<br>Країна призначення: Україна<br>Україна                                                                                                                                     |                |                            | Замовлення № / Order 112500000016<br>Контракт № / Contract<br>МЗК-1327342/10/20/СМЦ-С від 06.10.2020р.<br>Спец. № / Spec. № 1763 від 19.01.2023р. |                        |                   |                                   |
| Машини № / Carriage № BC4992EO / BC0098XX<br>ТТН № 91                                                                                                                                                              |                |                            | Доповнення до контракту / Supplement to Contract                                                                                                  |                        |                   |                                   |
| Вид вантажмиць • пакети<br>Type of packages bundles                                                                                                                                                                |                |                            | Кількість міщів / Quality of packages<br>7                                                                                                        |                        |                   |                                   |
| Найменування продукції / Description of goods                                                                                                                                                                      |                |                            | Стандарт / Standard                                                                                                                               |                        |                   |                                   |
| Труба профільна стальна /<br>Electrowelded profile steel pipe                                                                                                                                                      |                |                            | ДСТУ Б В.2.6-8-95 (ГОСТ 30245-94), ГОСТ 8639,<br>ГОСТ 8645, ГОСТ 13663                                                                            |                        |                   |                                   |
| Номер пакета<br>Lot number                                                                                                                                                                                         | Плівка<br>Heat | Марка сталі<br>Steel grade | Розміри, мм<br>Dimensions, mm                                                                                                                     |                        |                   | Вага нетто кг /<br>Weight net, kg |
|                                                                                                                                                                                                                    |                |                            | Діаметр<br>O.D. or I.D.                                                                                                                           | Товщина стінки<br>W.T. | Довжина<br>Length |                                   |
| 12-822/22                                                                                                                                                                                                          | 0122408-9      | Ст 3пс                     | 50x30                                                                                                                                             | 2                      | 6000              | 2 305                             |
| 10-529/22                                                                                                                                                                                                          | 0121308-1      | Ст 3пс                     | 60x40                                                                                                                                             | 1,8                    | 6000              | 1 870                             |
| 10-522/22                                                                                                                                                                                                          | 0121308-1      | Ст 3пс                     | 60x40                                                                                                                                             | 1,8                    | 6000              | 1 840                             |
| 10-523/22                                                                                                                                                                                                          | 0121308-1      | Ст 3пс                     | 60x40                                                                                                                                             | 1,8                    | 6000              | 1 840                             |
| 10-524/22                                                                                                                                                                                                          | 0121308-1      | Ст 3пс                     | 60x40                                                                                                                                             | 1,8                    | 6000              | 1 865                             |
| 01-68/23                                                                                                                                                                                                           | 121579         | Ст 3пс                     | 60x40                                                                                                                                             | 1,8                    | 6000              | 1 850                             |
| 12-139/22                                                                                                                                                                                                          | 0122432-2      | Ст 3пс                     | 60x60                                                                                                                                             | 4                      | 6000              | 3 125                             |
| Всього:                                                                                                                                                                                                            |                |                            |                                                                                                                                                   |                        |                   | 14 695                            |



СЕРТИФИКАТ ИСПЫТАНИЙ №314 от 1 августа 2022 г.

INSPECTION CERTIFICATE №314  
(EN 10204-3.1)

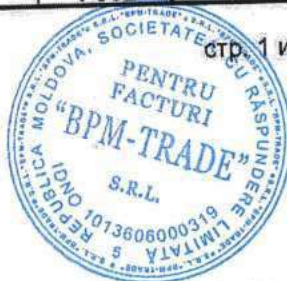
|                                                            |  |                                                                                                                     |  |
|------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------|--|
| Производитель:<br>Producer:                                |  | ООО "ВЕК"/SRL "VEK"                                                                                                 |  |
|                                                            |  | 3200, Бендеры, Молдова<br>ул.Дзержинского 4-А                                                                       |  |
|                                                            |  | Str. Dzerzhinsky, 4-A. 3200, Bendery, Moldova                                                                       |  |
|                                                            |  | Telefon: +373 522 2-09-05                                                                                           |  |
|                                                            |  | E-mail: export@vek-pmr.com                                                                                          |  |
|                                                            |  | http://www.vek-pmr.com                                                                                              |  |
| Потребитель, адрес, страна:<br>Consumer, address, country: |  | Грузополучатель, Адрес,<br>страна<br>BPM-TRADE SRL<br>Пункт разгрузки:<br>МОЛДОВА,<br>г.РЕЗИНА, ул.27 АВГУСТА,<br>5 |  |
| Дата отгрузки<br>Ship Date                                 |  | 1 августа 2022 г.                                                                                                   |  |
| Машина №<br>Carriage                                       |  | A 486 HB / AAB 423                                                                                                  |  |

|                                                      |    |              |            |
|------------------------------------------------------|----|--------------|------------|
| Контракт<br>Contract                                 | №7 | Дата<br>Date | 18.06.2018 |
| Дополнение к контракту:<br>Addendum to the contract: |    |              |            |
| Спецификация : №58 от 27.07.2022г                    |    |              |            |
| Заказ №<br>Order                                     |    | Дата<br>Date |            |

| Наименование продукции<br>Discription of goods                                                                                                                                                                                                                 | Стандарт<br>Standart | Вид груз.м.<br>Type of package | Кол-во мест Quantity of packages |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------------------|----------------------------------|
| Полые сварные профили (квадратные, прямоугольные) из конструкционных сталей S235JRH длина 6,0 м                                                                                                                                                                | EN 10219-1,2:2006    | Bundles                        | 16                               |
| Маркировка на бирке: завод, стандарт, марка стали, размеры трубы, длина, № пакета, № партии, количество труб, вес пакета.<br>Marking on bundle tag: plant, standart, stell grade, pipe dimensions, length, package №, lot №, quantity of pipe, package weight. |                      |                                |                                  |

| Номер партии Lot № | Номер плавки Heat № | Марка стали Stell grade | Размеры, мм Dimensions, mm |                     |                    | Кол-во труб, шт Q-ty of pipes, pcs | Кол-во метров Q-ty of meters, m | Кол-во пакетов Q-ty of packages s | Масса, тн Mass, mt |           |
|--------------------|---------------------|-------------------------|----------------------------|---------------------|--------------------|------------------------------------|---------------------------------|-----------------------------------|--------------------|-----------|
|                    |                     |                         | Размеры O.D. of I.D.       | Толщина стенки W.T. | Длина, м Length, m |                                    |                                 |                                   | Брутто Gross       | Нетто Net |
| СП-33-200722       | 1212164-9           | S235JRH                 | 40x40                      | 1,8                 | 6                  | 100                                | 600                             | 1                                 | 1,357              | 1,352     |
| СП-32-200722       | 1212164-9           | S235JRH                 | 40x40                      | 1,8                 | 6                  | 100                                | 600                             | 1                                 | 1,340              | 1,335     |
| СП-25-200722       | 1212164-9           | S235JRH                 | 40x40                      | 1,8                 | 6                  | 100                                | 600                             | 1                                 | 1,330              | 1,325     |
| СП-26-200722       | 1212164-9           | S235JRH                 | 40x40                      | 1,8                 | 6                  | 100                                | 600                             | 1                                 | 1,305              | 1,300     |
| СП-27-200722       | 1212164-9           | S235JRH                 | 40x40                      | 1,8                 | 6                  | 100                                | 600                             | 1                                 | 1,309              | 1,304     |
| СП-28-200722       | 1212164-9           | S235JRH                 | 40x40                      | 1,8                 | 6                  | 100                                | 600                             | 1                                 | 1,320              | 1,315     |
| СП-29-200722       | 1212164-9           | S235JRH                 | 40x40                      | 1,8                 | 6                  | 100                                | 600                             | 1                                 | 1,313              | 1,308     |
| СП-30-200722       | 1212164-9           | S235JRH                 | 40x40                      | 1,8                 | 6                  | 100                                | 600                             | 1                                 | 1,312              | 1,307     |
| СП-31-200722       | 1212164-9           | S235JRH                 | 40x40                      | 1,8                 | 6                  | 100                                | 600                             | 1                                 | 1,328              | 1,323     |
| СП-18-200722       | 1212164-9           | S235JRH                 | 40x40                      | 1,8                 | 6                  | 100                                | 600                             | 1                                 | 1,354              | 1,349     |
| СП-19-200722       | 1212164-9           | S235JRH                 | 40x40                      | 1,8                 | 6                  | 100                                | 600                             | 1                                 | 1,362              | 1,357     |
| СП-03-200722       | 1212164-9           | S235JRH                 | 40x40                      | 1,8                 | 6                  | 100                                | 600                             | 1                                 | 1,355              | 1,350     |
| СП-04-200722       | 1212164-9           | S235JRH                 | 40x40                      | 1,8                 | 6                  | 100                                | 600                             | 1                                 | 1,350              | 1,345     |
| СП-31-190722       | 812187              | S235JRH                 | 40x40                      | 1,8                 | 6                  | 100                                | 600                             | 1                                 | 1,353              | 1,348     |
| СП-01-110422       | 321186-4            | S235JRH                 | 50x50                      | 4,0                 | 6                  | 81                                 | 486                             | 1                                 | 2,715              | 2,710     |
| СП-03-110422       | 321186-4            | S235JRH                 | 50x50                      | 4,0                 | 6                  | 81                                 | 486                             | 1                                 | 2,725              | 2,720     |
| Итого:             |                     |                         |                            |                     |                    | 1 562                              | 9 372                           | 16                                | 24,128             | 24,048    |

Продолжение на обороте







СЕРТИФІКАТ ВИПРОБУВАНЬ № 5-83/3 від 14.12.2022  
INSPECTION CERTIFICATE  
(EN 10204 - 3.1)



|                                                                                           |                                                      |                       |              |              |
|-------------------------------------------------------------------------------------------|------------------------------------------------------|-----------------------|--------------|--------------|
| Виробник:<br>Producer:                                                                    | Контракт №<br>Contract                               | 09/154-2022           | Дата<br>Date | 21.04.2022   |
| TOB "ДМЗ КОМІНМЕТ"<br>LLC "DMZ KOMINMET"<br>7, Yakhnenkivska St. 49023<br>Dnipro, Ukraine |                                                      |                       |              |              |
| Споживач, адреса, країна:<br>Consumer, address, country:                                  | Доповнення до контракту:<br>Addendum to the contract |                       |              |              |
| Метінвест-СМЦ ТОВ<br>01010, м.Київ, вул.Острозьких Князів, Будинок № 8                    |                                                      |                       |              |              |
| Дата відвантаження<br>Ship Date                                                           | 23.02                                                | 2023                  |              |              |
| Машина №<br>Carriage                                                                      | AX3561MO                                             | Замовлення №<br>Order | 000000880    | Дата<br>Date |

| Найменування продукції<br>Description of goods                                                                                                         | Стандарт<br>Standart                        | Вид вантаж.<br>місця<br>Type of<br>package | Кіл-сть<br>місць<br>Quantity of<br>packages |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|--------------------------------------------|---------------------------------------------|
| Порожністі зварні профілі з конструкційних сталей<br>холодно-виготовлені профільні<br>Cold formed welded structural hollow sections of non-alloy steel | DIN EN 10219-1:2006, DIN EN<br>10219-2:2019 | Bundles                                    | 2                                           |

| Номер<br>партії<br>Lot № | Номер<br>плавки<br>Heat № | Марка сталі<br>Steel grade | Розміри, мм<br>Dimensions, mm |                           |                   | Кіл. труб<br>од.<br>Q-ty of<br>pipes,<br>pcs | Кіл.<br>метрів<br>Q-ty of<br>meters,<br>m | Кіл-сть<br>пакетів<br>Q-ty of<br>packages | Маса, т.<br>Mass, mt |
|--------------------------|---------------------------|----------------------------|-------------------------------|---------------------------|-------------------|----------------------------------------------|-------------------------------------------|-------------------------------------------|----------------------|
|                          |                           |                            | Діаметр<br>O.D. of I.D.       | Товщина<br>стілки<br>W.T. | Довжина<br>Length |                                              |                                           |                                           |                      |
| 1                        | 522195                    | S235JRH                    | 20x20                         | 2,00                      | 6 000             | 336                                          | 2 016                                     | 2                                         | 2,267                |
| Разом :                  |                           |                            |                               |                           |                   | 336                                          | 2 016                                     | 2                                         | 2,267                |
| Всього :                 |                           |                            |                               |                           |                   | 336                                          | 2 016                                     | 2                                         | 2,267                |

Продовження дивись з оборотної сторони ПТО





Форма EN 10204-3.1  
Form EN 10204-3.1

**СЕРТИФИКАТ ЯКОСТІ / QUALITY CERTIFICATE**  
**№ 1625 від 23.05.2023 / date 23.05.2023**



|                                                                                                                                                                                                                 |                |                            |                                                                                                        |                        |                   |                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------|--------------------------------------------------------------------------------------------------------|------------------------|-------------------|-----------------------------------|
| Виробник: Україна<br>ТЗ "Трубосталь" ПрАТ<br>тел. +38 (04142) 3-22-22<br>Producer: Ukraine. PJSC "Trubostal pipe plant"<br>11500, Zhitomir region, Korosten, Shatryshanska Str., 65<br>tel. +38 (04142) 3-22-22 |                |                            |                                                                                                        |                        |                   |                                   |
| Замовник / Customer<br><b>МЕТІНВЕСТ-СМЦ</b><br>Країна призначення:<br>Україна                                                                                                                                   |                |                            | Замовлення № / Order 112500000156<br>Контракт № / Contract<br>МЗК-1327342/10/20/СМЦ-С від 06.10.2020р. |                        |                   |                                   |
| Машина № / Carriage № ВХ1071ЕН / АС1463ХО<br>ТТН № 889                                                                                                                                                          |                |                            | Доповнення до контракту / Supplement to Contract<br>Спец. № / Spec. № 2065 від 01.05.2023              |                        |                   |                                   |
| Вид вантажмісць - пакети<br>Type of packages bundles                                                                                                                                                            |                |                            | Кількість місць / Quality of packages<br>1                                                             |                        |                   |                                   |
| Найменування продукції / Description of goods                                                                                                                                                                   |                |                            | Стандарт / Standart                                                                                    |                        |                   |                                   |
| Труба профільна стальна /<br>Electrowelded profile steel pipe                                                                                                                                                   |                |                            | ДСТУ 8940:2019                                                                                         |                        |                   |                                   |
| Номер пакета<br>Lot number                                                                                                                                                                                      | Плавка<br>Heat | Марка сталі<br>Steel grade | Розміри, мм<br>Dimensions, mm                                                                          |                        |                   | Вага нетто кг /<br>Weight net, kg |
|                                                                                                                                                                                                                 |                |                            | Діаметр<br>O.D. or I.D.                                                                                | Товщина стінки<br>W.T. | Довжина<br>Length |                                   |
| 02-214/7/23                                                                                                                                                                                                     | 723042         | Ст3пс                      | 100x100                                                                                                | 4                      | 12000             | 4 030                             |
| Всього:                                                                                                                                                                                                         |                |                            |                                                                                                        |                        |                   | 4 030                             |







Форма EN 10204-3.1  
Form EN 10204-3.1

# СЕРТИФИКАТ ЯКОСТІ / QUALITY CERTIFICATE

№ 1686 від 30.05.2023 / date 30.05.2023

| Виробник: Україна<br>ТЗ "Трубосталь" ПрАТ<br>тел.: +38 (04142) 3-22-22<br>Producer: Ukraine. PJSC "Trubostal pipe plant"<br>11500, Zhitomir region, Korosten, Shalyschanska Str., 65<br>tel: +38 (04142) 3-22-22 |                | Замовлення № / Order: 112500000117<br>Контракт № / Contract: МЗК-1327342/10/20/СМЦ-С від 06.10.2020р.<br>Додаток до контракту / Supplement to Contract: Спец. № / Spec. № 1990 від 31.03.2023 |                               |                                   |                   |        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------|-------------------|--------|
| Замовник / Customer: МЕТІНВЕСТ-СМЦ<br>Країна призначення: Україна                                                                                                                                                |                | Додаток до контракту / Supplement to Contract: Спец. № / Spec. № 1990 від 31.03.2023                                                                                                          |                               |                                   |                   |        |
| Машина № / Carriage №: A146890T / A15910XK<br>ПІЛН: 920                                                                                                                                                          |                | Кількість місць / Quality of packages: 0                                                                                                                                                      |                               |                                   |                   |        |
| Вид вантажівки - пакети<br>Type of packages bundles                                                                                                                                                              |                | Стандарт / Standard: ДСТУ 8940:2019                                                                                                                                                           |                               |                                   |                   |        |
| Найменування продукції / Description of goods: Труба профільна стальна / Electrowelded profile steel pipe                                                                                                        |                |                                                                                                                                                                                               |                               |                                   |                   |        |
| Номер пакета<br>Lot number                                                                                                                                                                                       | Плавка<br>Heat | Марка сталі<br>Steel grade                                                                                                                                                                    | Розміри, мм<br>Dimensions, mm | Вага нетто кг /<br>Weight net, kg |                   |        |
|                                                                                                                                                                                                                  |                |                                                                                                                                                                                               | Діаметр<br>O.D. or I.D.       | Товщина стінки<br>W.T.            | Довжина<br>Length |        |
| 05-1024/23                                                                                                                                                                                                       | 1223052-1      | Ст1пс                                                                                                                                                                                         | 40x20                         | 1.8                               | 6000              | 2 230  |
| 05-1025/23                                                                                                                                                                                                       | 1223052-1      | Ст1пс                                                                                                                                                                                         | 40x20                         | 1.8                               | 6000              | 2 205  |
| 05-1018/23                                                                                                                                                                                                       | 0513113-1      | Ст1пс                                                                                                                                                                                         | 40x20                         | 1.8                               | 6000              | 2 230  |
| 05-1019/23                                                                                                                                                                                                       | 0513113-1      | Ст1пс                                                                                                                                                                                         | 40x20                         | 1.8                               | 6000              | 2 205  |
| 05-1020/23                                                                                                                                                                                                       | 0513113-1      | Ст1пс                                                                                                                                                                                         | 40x20                         | 1.8                               | 6000              | 2 220  |
| 05-1012/23                                                                                                                                                                                                       | 131166         | Ст1пс                                                                                                                                                                                         | 40x20                         | 1.8                               | 6000              | 2 175  |
| 05-1015/23                                                                                                                                                                                                       | 1223104        | Ст1пс                                                                                                                                                                                         | 40x20                         | 1.8                               | 6000              | 2 200  |
| 05-1016/23                                                                                                                                                                                                       | 1223104        | Ст1пс                                                                                                                                                                                         | 40x20                         | 1.8                               | 6000              | 2 185  |
| 05-1017/23                                                                                                                                                                                                       | 1223104        | Ст1пс                                                                                                                                                                                         | 40x20                         | 1.8                               | 6000              | 2 220  |
| Всього:                                                                                                                                                                                                          |                |                                                                                                                                                                                               |                               |                                   |                   | 19 870 |





# METINBEÇ

СЕРТИФИКАТ ЯКОСТІ  
QUALITY CERTIFICATE  
№ 1102 от / DATE 13.04.2023

М. Савельев, ж. Елена Теркина, 51425 Дмитрия Теркина, с.б.,  
в. Календарев, ул. Савельева 180, г. Ижевск, Республика  
Ижевск 05393085, ф. 053930304037.

IBAN UA65304851000000002200339295 = AT\*TPMC\*

Tel: (0509) 55-91-49, E-mail: office\_kumar@strategyfirstinvesting.com

Legal address Ukraine, 51325, Dnipropetrovsk Oblast,  
Kamianska Shkola str., 19b  
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IRAN LIA3434561000000002800336265 JSC TUPPI  
Tel: (7639) 58-91-69 E-mail: office.kam-  
skaa@mts-ua.net

Вид свідоцтва про випробування / EN 10204-3.1:2004  
Type of inspection document

Исходя из этого, компания сертифицирована по стандарту ISO 9001:2015 на производство товарных продуктов из нержавеющей стали, а также на производство продукции из нержавеющей стали и алюминия. Сертификат выдан Intertek Certification Limited, Великобритания, DE 24 82Z, Делфт, 10A Victory Way, Derby Park (англ.) (номер NC104123 от 08.08.2020 г.) Intertek Certification Limited, 10A Victory Road, Derby DE24 8ZF, United Kingdom (the certificate is 0104123 of 08.08.2020), has confirmed quality management system compliance with the requirements of ISO 9001:2015 in the manufacture of metal products of stainless, stainless, rolling production.

|                     |                                                                                                     |
|---------------------|-----------------------------------------------------------------------------------------------------|
| Замовник / Customer | ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ "МЕТІНВЕСТ-СМЛ" / LIMITED LIABILITY COMPANY "METINVEST-SMC" |
|---------------------|-----------------------------------------------------------------------------------------------------|

|                                              |         |                        |             |
|----------------------------------------------|---------|------------------------|-------------|
| Заводське замовлення № /<br>Production order | 1473736 | Замовлення № / Order № | 220012-8035 |
|----------------------------------------------|---------|------------------------|-------------|

Договір, контракт №: / Contract M3-1614623/12/21/21/M-494 від / date 01.12.2021 Специфікація № / Specification № 429

№ транспортного засобу / RW-car 63378574

|                           |                            |
|---------------------------|----------------------------|
| № дата / Lot              |                            |
| Найменування продукції: / | Кутики різноплічні 90х90х6 |

ND на марку сталі / ND for steel DSTU 2551:2005 / OCT 380-2005 / DSTU 2551:2005 / GOST 380-2005

НТД на продукцию / standards and technical documentation for products: ДСТУ 2251:2018/DSTU 2251:2018

|                |                                                           |
|----------------|-----------------------------------------------------------|
| HTD / Standart | ДСТУ 4484:2005/ГОСТ 535-2005/DSTU 4484:2005/ГОСТ 535-2005 |
|----------------|-----------------------------------------------------------|

Маркування / Marking

Клеймо / Hard stamp

[illegible]

Всего за сертификатом/total under the certificate

Вирназна/Steelmaking process Конвертерна/Basic oxygen





Сертификат качества № 50119 23 январь 2023

Покупатель: BPM-TRADE SRL  
Юридический адрес: REZINA, STR. 27 AUGUST 5, MD-540  
Станция назначения: Самовывоз

Производитель: ОТКРЫТОЕ АКЦИОНЕРНОЕ ОБЩЕСТВО "МОЛДАВСКИЙ МЕТАЛЛУРГИЧЕСКИЙ ЗАВОД"  
Страна происхождения: Молдова  
Код ТН ВЭД : 721391410

Продукция: Катанка;

Заказ-наряд: 3042804202 Вагон/авт: BPM539/S583SJ Вид упаковки: БУНТЫ

| № п/п | Номер плавки | Класс прочн. Марка стали | Технические требования                   | Доп. техтреб. | Стандарт на размеры | Размер профиля | Длина | Сорт | Кол мест | Вес тн | Кол-во шт |
|-------|--------------|--------------------------|------------------------------------------|---------------|---------------------|----------------|-------|------|----------|--------|-----------|
| 1     | 22202399     | 1006                     | ХИМСОСТАВ КОНТРАКТНЫЙ<br>ASTM A510M-2006 |               | KAT ASTM A510M-2006 | 5.5            | БУНТЫ | 1    | 5        | 6.914  |           |
| 2     | 22300074     | 1006                     | ХИМСОСТАВ КОНТРАКТНЫЙ<br>ASTM A510M-2006 |               | KAT ASTM A510M-2006 | 5.5            | БУНТЫ | 1    | 11       | 14.503 |           |

ВСЕГО: 21.417

Наименование тех. требований (расшифровка)

Мех. свойства и технологич. испытания

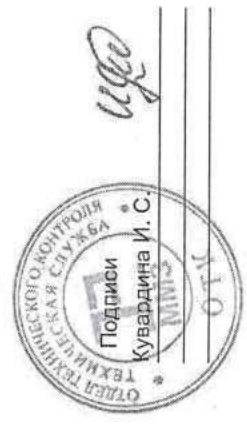
| Химический состав, % |     | Мех. свойства и технологич. испытания |          |          |          |          |         |         |         |         |         |
|----------------------|-----|---------------------------------------|----------|----------|----------|----------|---------|---------|---------|---------|---------|
| N                    | п-п | ПРЕДЕЛ ПРОЧНОСТИ Н/мм2                |          |          |          |          |         |         |         |         |         |
|                      |     | C x 100                               | Mn x 100 | Si x 100 | P x 1000 | S x 1000 | C x 100 | N x 100 | C x 100 | N x 100 | C x 100 |
| 1                    | 4   | 32                                    | 9        | 16       | 7        | 6        | 11      | 28      | 396     |         |         |
| 2                    | 5   | 33                                    | 8        | 14       | 7        | 6        | 13      | 26      | 405     |         |         |



Примечания Механические свойства, химический состав фактические.

Указанная в сертификате продукция соответствует действующим стандартам и техническим условиям При переписке по вопросам качества ссылаетесь на номер сертификата

Результаты радиационного контроля  
Удельная активность радионуклидов соответствует ГОСТ Р 51713-2001.  
Допускается неограниченное использование металла





СЕРТИФІКАТ ЯКОСТІ N 920

Вантажовідправник м. Кам'янське, Україна  
ТДВ "ЗАВОД МЕТИЗ"

Вантажоотримувач: ТОВ "МЕТІНВЕСТ-СМЦ"

Дата відгрузки: 11.11.2022

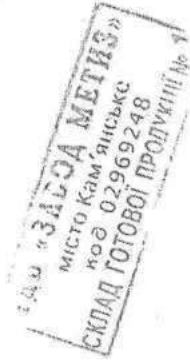
Накладна N: 920

A/M N: AE52071T

| ГОСТ         | Умовне позначення                                                             | Кількість місць, шт | Загальна вага, т | Сумарна активність природних радіонуклідів не перевищує 370 Бк/кг у відповідності до НРБУ-97, пункт 8.6.1(б) |
|--------------|-------------------------------------------------------------------------------|---------------------|------------------|--------------------------------------------------------------------------------------------------------------|
| ГОСТ 3282-74 | Послуги з переробки катанки в дрот<br>1.20 О-ч ТУ У<br>27.3-02969248-004.2011 |                     | 22 866           |                                                                                                              |

Вміст С не більше, ніж 0.12 %

Вміст С не більше, ніж 0,12 %







**ÇELSANTAS**  
ÇELİK MAMÜLLERİ SAN. VE TİC. A.Ş.

Inspection No: 23/01/012

Order No: 20000299

L/C No: BİMETCOM SRL

Customer: E.A.F.

Melting process: As-rolled (AR)

Heat treatment: As-rolled (AR)

**MILL'S TEST CERTIFICATION**

ACC. TO EN 10204 / 3.1.

ÇELSANTAS ÇELİK MAMÜLLERİ SAN. VE TİC. A.Ş.

Kale Köyü Organize Sanayi Bölgesi Mevki OSB Yolu Cad. No:25 / KARABÜK

Kale Köyü Organize Sanayi Bölgesi Mevki OSB Yolu Cad. No:25 / KARABÜK

HEAD OFFICE: 19.01.2023

MILLSHOP:

**SPECIFICATION**

HOT ROLLED SECTIONS OF NON-ALLOY STRUCTURAL STEEL  
EQUAL ANGLES AND PROFILES  
S235JR+AR  
ACCORDING TO MS EN 10025-2 : 2011

CE Marking Certificate Number : 2344-CPR-0002

CEQ = C + Mn/6 + (Cr+Mo+V)/5 + (Ni+Cu)/5  
CHEMICAL AND MECHANICAL VALUES AND U SIGN MATERIAL SUITABLE FOR GALVANIZING I.E. SI-CONTENT 0,031 OR 0,15-0,25 %

**CE**

2344-CPR-0002

WE HEREBY CERTIFY THAT THE MATERIAL HAS BEEN MADE AND TESTED IN ACCORDANCE WITH THE ABOVE SPECIFICATION AND ALSO WITH THE REQUIREMENTS CALLED FOR BY THE ABOVE ORDER

QUALITY MANAGER

ЧАСТНОЕ АКЦИОНЕРНОЕ ОБЩЕСТВО "МАРИУПОЛЬСКИЙ МЕТАЛЛУРГИЧЕСКИЙ КОМБИНАТ ИМЕНИ ИЛЬИЧА"  
PRIVATE JOINT STOCK COMPANY "ILYICH IRON AND STEEL WORKS OF MARIUPOL"



**METINVEST**

**СЕРТИФИКАТ КАЧЕСТВА**  
**QUALITY CERTIFICATE**  
**№ 3124 / DATE 10.06.2021**

87504 г. Мариуполь ул. Левченко, 1. Телекс 115157  
DEPO SU Levchenko, 1, Mariupol, 87504 Telex 115157  
fax 38(0623)87-91-66 office@ilyichsteel.com

Вид свидетельства об испытаниях / EN 10204-3.1  
Type of inspection document

Соответствие системы менеджмента качества на комбинате, требованиям стандарта ISO 9001:2015, подтверждено органом по сертификации TÜV SÜD Management Service GmbH (сертификат № 1210044452 TMS от 07.11.2020г) / Quality management system compliance with the requirements of ISO 9001:2015 at the Works has been confirmed by TÜV SÜD Management Service GmbH Certification Body (the certificate №1210044452 TMS dd. 07.11.2020)

Заказчик / Customer ОБЩЕСТВО С ОГРАНИЧЕННОЙ ОТВЕТСТВЕННОСТЬЮ "МЕТИНВЕСТ-СМЦ" / LIMITED LIABILITY COMPANY "METINVEST-SMC"  
Заводской заказ № / Production order 1210507  
Договор, контракт №: / Contract 12СМЦ/43/006-17  
Заказ № / Order № 608620004959  
от / date 01.03.2017  
Спецификация № / Specification № 1753

№ транспортного средства / RW-car 52513413

№ лота / Lot

Грузополучатель: / Receiver ОБЩЕСТВО С ОГРАНИЧЕННОЙ ОТВЕТСТВЕННОСТЬЮ "ВИМЕТКОМ" SRL / SRL "BIMETCOM"

№ ж/д накладных / waybills

Наименование продукции / Description of goods Сварные полые профили, изготовленные холодным способом / Cold-formed welded hollow sections

НД на марку стали / Standards for steel grade EN 10219-1:2006/EN 10219-1:2006

НД на сортамент / Standards for dimensions EN 10219-2:2006/EN 10219-2:2006

НД на продукцию / Standards and technical documentation for products EN 10219-1:2006/EN 10219-1:2006

Маркировка / Marking Товарный знак / TRADE MARK, Произведено в Украине / MADE IN UKRAINE, номер спецификации / specification number, марка стали / steel grade, размеры в мм / dimensions in mm, номер плавки / cast number, номер партии / test number, номер лота / lot number, знак CE / CE-mark

Состояние поставки / Product delivery condition

Примечание/Note Вес фактический / ACTUAL WEIGHT. Профили с квадратным сечением / SQUARE SECTIONS. Профили с прямоугольным сечением / RECTANGULAR SECTIONS. Данные по метражу и количеству изделий факультативны / PRODUCTS LENGTH IN METERS AND QUANTITY IS OPTIONAL.  
Продукция соответствует требованиям ДСТУ 2651-2005/ ГОСТ 380-2005, ГОСТ 13663-86 ГОСТ 8639-82, ГОСТ 8645-88.

/Выплавка/Steelmaking process Конверторная/мартеновская//Basic oxygen/Open-hear

| Плавка № / Heat                                       | Партия № / Lot № | Марка стали / Steel grade | Группа изготовления / group manufacturing | Диаметр/ Условный проход, # мм / Diameter, mm | НхВ    | Толщина, мм / thickness, mm | Длина, мм / length, mm | Метраж, м / Total length, m | Вес одного метра / weight per meter | № пачки / № Bundle | Количество товара, шт / Quantity of goods | Количество изделий, шт / Quantity of goods | Масса брутто, т / Mass gross, tn | Масса нетто, т / Mass net, tn |
|-------------------------------------------------------|------------------|---------------------------|-------------------------------------------|-----------------------------------------------|--------|-----------------------------|------------------------|-----------------------------|-------------------------------------|--------------------|-------------------------------------------|--------------------------------------------|----------------------------------|-------------------------------|
| 311022-4                                              | 4-211379         | S235JRH                   |                                           |                                               | 50x25  | 1,80                        | 6000                   |                             |                                     | 1676               | 1                                         | 204                                        | 2,385                            | 2,380                         |
| 311022-4                                              | 4-211379         | S235JRH                   |                                           |                                               | 50x25  | 1,80                        | 6000                   |                             |                                     | 1677               | 1                                         | 204                                        | 2,390                            | 2,385                         |
|                                                       |                  |                           |                                           |                                               |        |                             |                        | 2441                        | 1,952                               |                    |                                           |                                            |                                  |                               |
| 311363-3                                              | 4-211378         | S235JRH                   |                                           |                                               | 50x25  | 1,80                        | 6000                   |                             |                                     | 1675               | 1                                         | 204                                        | 2,395                            | 2,390                         |
| 311363-3                                              | 4-211378         | S235JRH                   |                                           |                                               | 50x25  | 1,80                        | 6000                   |                             |                                     | 1674               | 1                                         | 204                                        | 2,390                            | 2,385                         |
|                                                       |                  |                           |                                           |                                               |        |                             |                        | 2446                        | 1,952                               |                    |                                           |                                            |                                  |                               |
| 313225-4                                              | 4-211365         | S235JRH                   |                                           |                                               | 50x25  | 2,80                        | 6000                   |                             |                                     | 1618               | 1                                         | 136                                        | 2,590                            | 2,585                         |
| 313225-4                                              | 4-211365         | S235JRH                   |                                           |                                               | 50x25  | 2,80                        | 6000                   |                             |                                     | 1617               | 1                                         | 136                                        | 2,600                            | 2,595                         |
|                                                       |                  |                           |                                           |                                               |        |                             |                        | 1791                        | 2,092                               |                    |                                           |                                            |                                  |                               |
| 313795-4                                              | 3-211760         | S235JRH                   |                                           |                                               | 100x60 | 4,80                        | 6000                   |                             |                                     | 641                | 1                                         | 35                                         | 2,395                            | 2,390                         |
| 313795-4                                              | 3-211760         | S235JRH                   |                                           |                                               | 100x60 | 4,80                        | 6000                   |                             |                                     | 640                | 1                                         | 35                                         | 2,390                            | 2,385                         |
|                                                       |                  |                           |                                           |                                               |        |                             |                        | 439                         | 10,368                              |                    |                                           |                                            |                                  |                               |
| 313894-4                                              | 3-211731         | S235JRH                   |                                           |                                               | 100x60 | 3,80                        | 6000                   |                             |                                     | 542                | 1                                         | 48                                         | 2,660                            | 2,655                         |
| 313894-4                                              | 3-211731         | S235JRH                   |                                           |                                               | 100x60 | 3,80                        | 6000                   |                             |                                     | 543                | 1                                         | 48                                         | 2,650                            | 2,645                         |
|                                                       |                  |                           |                                           |                                               |        |                             |                        | 603                         | 8,000                               |                    |                                           |                                            |                                  |                               |
| Всего по сертификату / In total under the certificate |                  |                           |                                           |                                               |        |                             |                        |                             |                                     |                    | 34                                        | 2238                                       | 66,000                           | 65,830                        |



Продукция: Катанка;

Заказ-наряд: 3042804702

Вагон/авт: BPM567/O416EE

Вид упаковки: БУНТЫ

| Ном. и поз | Номер плавки | Класс прочн. Марка стали | Технические требования                | Доп. техтреб. | Стандарт на размеры | Размер профиля | Длина | Сорт | Кол мест | Вес тн | Кол-во шт |
|------------|--------------|--------------------------|---------------------------------------|---------------|---------------------|----------------|-------|------|----------|--------|-----------|
| 17         | 22301102     | 1006                     | ХИМСОСТАВ КОНТРАКТНЫЙ ASTM A510M-2006 |               | KAT ASTM A510M-2006 | 5.5            | БУНТЫ | 1    | 4        | 5.523  |           |
| 17         | 22301116     | 1006                     | ХИМСОСТАВ КОНТРАКТНЫЙ ASTM A510M-2006 |               | KAT ASTM A510M-2006 | 5.5            | БУНТЫ | 1    | 13       | 18.068 |           |

ВСЕГО: 23.591

Именование тех. требований (расшифровка)

Мех. свойства и технологич. испытания

| Химический состав, % | Мех. свойства и технологич. испытания |          |          |          |          |          |          |          |                        |    |
|----------------------|---------------------------------------|----------|----------|----------|----------|----------|----------|----------|------------------------|----|
|                      | С × 100                               | Мn × 100 | Si × 100 | P × 1000 | S × 1000 | Cr × 100 | Ni × 100 | Cu × 100 | ПРЕДЕЛ ПРОЧНОСТИ Н/мм2 | ТН |
| 4                    | 31                                    | 8        | 14       | 5        | 5        | 12       | 35       | 415      |                        |    |
| 5                    | 33                                    | 7        | 13       | 6        | 6        | 12       | 38       | 421      |                        |    |

Замечания Механические свойства контрактные.

Заявленная в сертификате продукция соответствует действующим стандартам и техническим условиям

При переписке по вопросам качества обращайтесь на номер сертификата

Зульматы радиационного контроля  
Эмальная активность радионуклидов соответствует ГОСТ Р 51713-2001.  
Пускается неограниченное использование металла



Contract №: 428  
Data: 02.12.2020  
Specificatie: 47  
Ordin: 3042804701



Mijloc de transport  
Numar  
de vehicul: BPM542/S264HS

Prodicator:  
JOINT STOCK COMPANY "MOLDOVA STEEL WORKS"  
1 Industrialnaya str., Rybnitsa, Moldova

Nomenclatorul marfurilor:  
721420000

Cumparator:  
BPM-TRADE SRL  
Tara de destinatie:  
MOLDOVA REPUBLIC OF

### CERTIFICAT DE INSPECTIE NO 51563

This certificate complies with requirements of EN 10204. Type 3.1

| Forma de livrare: Bare                          |            |             |               |               |                | Standard<br>ET 01/01-046:2020; |              |
|-------------------------------------------------|------------|-------------|---------------|---------------|----------------|--------------------------------|--------------|
| Descrierea bunurilor: ARMATURA LAMINATA LA CALD |            |             |               |               |                |                                |              |
| No                                              | Nr. sarjei | Nr. lotului | Marca de otel | Dimensiune mm | Lungime mm     | Numar de legaturi              | Greutatea MT |
| 1                                               | 22300997   |             | B500B         | 8             | 12000 (+/-100) | 9                              | 23.809       |
|                                                 |            |             |               |               |                | 9                              | 23.809       |

| Compozitie Chimica - % |           |            |            |            |            |           |
|------------------------|-----------|------------|------------|------------|------------|-----------|
| No                     | C<br>x100 | P<br>x1000 | S<br>x1000 | Cu<br>x100 | N<br>x1000 | Ceq<br>x1 |
| 1                      | 21        | 23         | 6          | 39         | 8          | .398      |

| Proprietati mecanice |                                              |                                 |                                          |                           |                  |                                    |                          |                   |
|----------------------|----------------------------------------------|---------------------------------|------------------------------------------|---------------------------|------------------|------------------------------------|--------------------------|-------------------|
| No                   | Rezistenta la rupere la tractiune, Rm, N/mm2 | Limita de curgere, Rp0.2, N/mm2 | Alungirea totala la forta maxima, Agt, % | Masa pe metru linar, kg/m | Raport Rm/Rp0.2, | Suprafata relativa a nervurii, Fr, | Alungirea la rupere, An, | Indoire/ dezdore, |
| 1                    | 691                                          | 579                             | 9.5                                      | 0.402                     | 1.19             | 0.066                              | 26.0                     | buna              |

Materialul a fost testat radiologic si nu emite radiatii periculoase  
Nota



Semnatura: controller  
departament de control tehnic  
Lastoviak A. N.  
19.06.2023

Marcarea



Contract №: 428  
Data: 02.12.2020  
Specificatie: 47  
Ordin: 3042804701



Mijloc de transport  
Numar  
de vehicul: BPM542/S264HS

Prodicator:  
JOINT STOCK COMPANY "MOLDOVA STEEL WORKS"  
1 Industrialnaya str., Rybnitsa, Moldova  
Nomenclatorul marfurilor:  
721420000

Cumparator:  
BPM-TRADE SRL  
Tara de destinatie:  
MOLDOVA REPUBLIC OF

### CERTIFICAT DE INSPECTIE NO 51547

This certificate complies with requirements of EN 10204. Type 3.1

| Forma de livrare: Bare                          |            |             |               |               |                | Standard<br>SMSR EN10080:2014; ET 01/01-046:2020 |              |
|-------------------------------------------------|------------|-------------|---------------|---------------|----------------|--------------------------------------------------|--------------|
| Descrierea bunurilor: ARMATURA LAMINATA LA CALD |            |             |               |               |                |                                                  |              |
| No                                              | Nr. sarjei | Nr. lotului | Marca de otel | Dimensiune mm | Lungime mm     | Numar de legaturi                                | Greutatea MT |
| 1                                               | 22301005   |             | B500B         | 10            | 12000 (+/-100) | 9                                                | 21.646       |
| 2                                               | 22301007   |             | B500B         | 10            | 12000 (+/-100) | 1                                                | 1.500        |
|                                                 |            |             |               |               |                | 10                                               | 23.146       |

| Compozitie Chimica - % |        |         |         |         |         |        |
|------------------------|--------|---------|---------|---------|---------|--------|
| No                     | C x100 | P x1000 | S x1000 | Cu x100 | N x1000 | Ceq x1 |
| 1                      | 21     | 14      | 7       | 37      | 9       | .393   |
| 2                      | 21     | 18      | 9       | 38      | 8       | .395   |

| Proprietati mecanice |                                              |                                 |                                          |                            |                  |                                    |                          |                   |
|----------------------|----------------------------------------------|---------------------------------|------------------------------------------|----------------------------|------------------|------------------------------------|--------------------------|-------------------|
| No                   | Rezistenta la rupere la tractiune, Rm, N/mm2 | Limita de curgere, Rp0.2, N/mm2 | Alungirea totala la forta maxima, Agt, % | Masa pe metru liniar, kg/m | Raport Rm/Rp0.2, | Suprafata relativa a nervurii, Fr, | Alungirea la rupere, An, | Indoire/ dezoire, |
| 1                    | 666                                          | 561                             | 12.5                                     | 0.626                      | 1.19             | 0.078                              | 24.0                     | buna              |
| 2                    | 661                                          | 552                             | 11.5                                     | 0.615                      | 1.20             | 0.080                              | 24.0                     | buna              |

Materialul a fost testat radiologic si nu emite radiatii periculoase

Nota



Marcarea



Semnatura: controller  
departament de control tehnic  
Kuvardina I. S.  
16.06.2023

Contract №: 428  
Data: 02.12.2020  
Specificatie: 47  
Ordin: 3042804701



Mijloc de transport  
Numar  
de vehicul: BPM570/S819HS

Prodicator:  
JOINT STOCK COMPANY "MOLDOVA STEEL WORKS"  
1 Industrialnaya str., Rybnitsa, Moldova  
Nomenclatorul marfurilor:  
721420000

Cumparator:  
BPM-TRADE SRL  
Tara de destinatie:  
MOLDOVA REPUBLIC OF

### CERTIFICAT DE INSPECTIE NO 51553

This certificate complies with requirements of EN 10204. Type 3.1

| Forma de livrare: Bare                          |            |             |               |               |                | Standard<br>ET 01/01-046:2020; |              |
|-------------------------------------------------|------------|-------------|---------------|---------------|----------------|--------------------------------|--------------|
| Descrierea bunurilor: ARMATURA LAMINATA LA CALD |            |             |               |               |                |                                |              |
| No                                              | Nr. sarjei | Nr. lotului | Marca de otel | Dimensiune mm | Lungime mm     | Numar de legaturi              | Greutatea MT |
| 1                                               | 22300389   |             | B500B         | 12            | 12000 (+/-100) | 8                              | 21.578       |
|                                                 |            |             |               |               |                | 8                              | 21.578       |

| Compozitie Chimica - % |        |         |         |         |         |        |
|------------------------|--------|---------|---------|---------|---------|--------|
| No                     | C x100 | P x1000 | S x1000 | Cu x100 | N x1000 | Ceq x1 |
| 1                      | 20     | 20      | 7       | 34      | 7       | .331   |

| Proprietati mecanice |                                              |                                 |                                          |                            |                  |                                    |                          |                   |
|----------------------|----------------------------------------------|---------------------------------|------------------------------------------|----------------------------|------------------|------------------------------------|--------------------------|-------------------|
| No                   | Rezistenta la rupere la tractiune, Rm, N/mm2 | Limita de curgere, Rp0.2, N/mm2 | Alungirea totala la forta maxima, Agt, % | Masa pe metru liniar, kg/m | Raport Rm/Rp0.2, | Suprafata relativa a nervurii, Fr, | Alungirea la rupere, An, | Indoire/ dezdore, |
| 1                    | 653                                          | 565                             | 9.5                                      | 0.884                      | 1.16             | 0.077                              | 23.0                     | buna              |

Materialul a fost testat radiologic si nu emite radiatii periculoase  
Nota



|          |                                                                                             |
|----------|---------------------------------------------------------------------------------------------|
| Marcarea | <br>Semnatura: controller<br>departament de control tehnic<br>Lastoviak A. N.<br>16.06.2023 |
|----------|---------------------------------------------------------------------------------------------|



Contract №: 428  
Data: 02.12.2020  
Specificatie: 47  
Ordin: 3042804701



Mijloc de transport  
Numar  
de vehicul: BPM558/X362XC

Prodicator:  
JOINT STOCK COMPANY "MOLDOVA STEEL WORKS"  
1 Industrialnaya str., Rybnitsa, Moldova

Nomenclatorul marfurilor:  
721420000

Cumparator:  
BPM-TRADE SRL  
Tara de destinatie:  
MOLDOVA REPUBLIC OF

### CERTIFICAT DE INSPECTIE NO 51556

This certificate complies with requirements of EN 10204. Type 3.1

| Forma de livrare: Bare                          |            |             |               |               |                | Standard<br>ET 01/01-046:2020; |              |
|-------------------------------------------------|------------|-------------|---------------|---------------|----------------|--------------------------------|--------------|
| Descrierea bunurilor: ARMATURA LAMINATA LA CALD |            |             |               |               |                |                                |              |
| No                                              | Nr. sarjei | Nr. lotului | Marca de otel | Dimensiune mm | Lungime mm     | Numar de legaturi              | Greutatea MT |
| 1                                               | 22300826   |             | B500B         | 14            | 12000 (+/-100) | 9                              | 23.936       |
|                                                 |            |             |               |               |                | 9                              | 23.936       |

| Compozitie Chimica - % |        |         |         |         |         |        |
|------------------------|--------|---------|---------|---------|---------|--------|
| No                     | C x100 | P x1000 | S x1000 | Cu x100 | N x1000 | Ceq x1 |
| 1                      | 21     | 18      | 6       | 36      | 9       | .336   |

| Proprietati mecanice |                                              |                                 |                                          |                            |                  |                                    |                          |                   |
|----------------------|----------------------------------------------|---------------------------------|------------------------------------------|----------------------------|------------------|------------------------------------|--------------------------|-------------------|
| No                   | Rezistenta la rupere la tractiune, Rm, N/mm2 | Limita de curgere, Rp0.2, N/mm2 | Alungirea totala la forta maxima, Agt, % | Masa pe metru liniar, kg/m | Raport Rm/Rp0.2, | Suprafata relativa a nervurii, Fr, | Alungirea la rupere, An, | Indoire/ dezdore, |
| 1                    | 696                                          | 584                             | 10.5                                     | 1.250                      | 1.19             | 0.084                              | 23.0                     | buna              |

Materialul a fost testat radiologic si nu emite radiatii periculoase

Nota



|          |                                                                                               |
|----------|-----------------------------------------------------------------------------------------------|
| Marcarea | <br>Semnatura: controller<br>departament de control tehnic<br>Terletckaja E. P.<br>17.06.2023 |
|----------|-----------------------------------------------------------------------------------------------|

|                                                                                                                                                              |                                                                                          |                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| <b>Contract №:</b> 428<br><b>Data:</b> 02.12.2020<br><b>Specificatie:</b> 47<br><b>Ordin:</b> 3042804701                                                     |         | <b>Mijloc de transport</b><br><b>Numar de vehicul:</b> BPM554/X838XC |
| <b>Producator:</b><br>JOINT STOCK COMPANY "MOLDOVA STEEL WORKS"<br>1 Industrialnaya str., Rybnitsa, Moldova<br><b>Nomenclatorul marfurilor:</b><br>721420000 | <b>Cumparator:</b><br>BPM-TRADE SRL<br><b>Tara de destinatie:</b><br>MOLDOVA REPUBLIC OF |                                                                      |

### CERTIFICAT DE INSPECTIE NO 51584

This certificate complies with requirements of EN 10204. Type 3.1

| <b>Forma de livrare:</b> Bare                          |            |             |               |               |                |                                       |              |
|--------------------------------------------------------|------------|-------------|---------------|---------------|----------------|---------------------------------------|--------------|
| <b>Descrierea bunurilor:</b> ARMATURA LAMINATA LA CALD |            |             |               |               |                | <b>Standard</b><br>ET 01/01-046:2020; |              |
| No                                                     | Nr. sarjei | Nr. lotului | Marca de otel | Dimensiune mm | Lungime mm     | Numar de legaturi                     | Greutatea MT |
| 1                                                      | 22300526   |             | B500B         | 16            | 12000 (+/-100) | 9                                     | 24.130       |
|                                                        |            |             |               |               |                | 9                                     | 24.130       |

| Compozitie Chimica - % |           |            |            |            |            |           |
|------------------------|-----------|------------|------------|------------|------------|-----------|
| No                     | C<br>x100 | P<br>x1000 | S<br>x1000 | Cu<br>x100 | N<br>x1000 | Ceq<br>x1 |
| 1                      | 23        | 20         | 5          | 37         | 8          | .364      |

| Proprietati mecanice |                                              |                                 |                                          |                            |                  |                                    |                          |                   |
|----------------------|----------------------------------------------|---------------------------------|------------------------------------------|----------------------------|------------------|------------------------------------|--------------------------|-------------------|
| No                   | Rezistenta la rupere la tractiune, Rm, N/mm2 | Limita de curgere, Rp0.2, N/mm2 | Alungirea totala la forta maxima, Agt, % | Masa pe metru liniar, kg/m | Raport Rm/Rp0.2, | Suprafata relativa a nervurii, Fr, | Alungirea la rupere, An, | Indoire/ dezoire, |
| 1                    | 714                                          | 613                             | 9.5                                      | 1.590                      | 1.17             | 0.085                              | 22.5                     | buna              |

Materialul a fost testat radiologic si nu emite radiatii periculoase  
 Nota



|                 |                                                                                               |
|-----------------|-----------------------------------------------------------------------------------------------|
| <b>Marcarea</b> | <b>Semnatura:</b> controller departament de control tehnic<br>Chikantceva T. A.<br>20.06.2023 |
|-----------------|-----------------------------------------------------------------------------------------------|





Contract №: 428  
Data: 02.12.2020  
Specificatie: 47  
Ordin: 3042804701



Mijloc de transport  
Numar  
de vehicul: BPM562/S196SJ

Produtor:  
JOINT STOCK COMPANY "MOLDOVA STEEL WORKS"  
1 Industrialnaya str., Rybnitsa, Moldova  
Nomenclatorul marfurilor:  
721420000

Cumparator:  
BPM-TRADE SRL  
Tara de destinatie:  
MOLDOVA REPUBLIC OF

### CERTIFICAT DE INSPECTIE NO 51568

This certificate complies with requirements of EN 10204. Type 3.1

| Forma de livrare: Bare                          |            |             |               |               |                | Standard<br>ET 01/01-046:2020; |              |
|-------------------------------------------------|------------|-------------|---------------|---------------|----------------|--------------------------------|--------------|
| Descrierea bunurilor: ARMATURA LAMINATA LA CALD |            |             |               |               |                |                                |              |
| Nr.                                             | Nr. sarjei | Nr. lotului | Marca de otel | Dimensiune mm | Lungime mm     | Numar de legaturi              | Greutatea MT |
| 1                                               | 22300924   |             | B500B         | 18            | 12000 (+/-100) | 9                              | 23.516       |
|                                                 |            |             |               |               |                | 9                              | 23.516       |

| Compozitie Chimica - % |        |         |         |         |         |        |
|------------------------|--------|---------|---------|---------|---------|--------|
| Nr.                    | C x100 | P x1000 | S x1000 | Cu x100 | N x1000 | Ceq x1 |
| 1                      | 20     | 19      | 10      | 40      | 8       | .385   |

| Proprietati mecanice |                                              |                                 |                                          |                            |                  |                                    |                          |                    |
|----------------------|----------------------------------------------|---------------------------------|------------------------------------------|----------------------------|------------------|------------------------------------|--------------------------|--------------------|
| Nr.                  | Rezistenta la rupere la tractiune, Rm, N/mm2 | Limita de curgere, Rp0.2, N/mm2 | Alungirea totala la forta maxima, Agt, % | Masa pe metru liniar, kg/m | Raport Rm/Rp0.2, | Suprafata relativa a nervurii, Fr, | Alungirea la rupere, An, | Indoire/ dezdoire, |
| 1                    | 684                                          | 579                             | 10.0                                     | 1.991                      | 1.18             | 0.075                              | 21.0                     | buna               |

Materialul a fost testat radiologic si nu emite radiatii periculoase  
Nota



|          |                                                                                                                                                                                   |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Marcarea | <br>Semnatura: controller<br>departament de control tehnic<br>Lastoviyak A. N.<br>19.06.2023 |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A06 CLIENTE / CUSTOMER:

A02 Normativa EN 10204 3.1  
A03 Numero: 003335 2023 del 9/06/23  
Pag. 1  
Your Ref.: 2008107 BUCURESTI / 4/05/23

THYSSENKRUPP MATERIALS ROMANIA SRL  
BD.BASARABIA NR. 256, FORJA PRESE,  
03035 BUCHAREST (RO)

012427

| DdT / SHIPPING DOCUMENT:                          |  |                                             |  | ANALISI CHIMICHE / CHEMICAL COMPOSITION |      |                          |     |                                           |      |                            |     |       |                                                    |                                              |  |                                |  |                                              |  |         |  |         |  |         |  |              |  |
|---------------------------------------------------|--|---------------------------------------------|--|-----------------------------------------|------|--------------------------|-----|-------------------------------------------|------|----------------------------|-----|-------|----------------------------------------------------|----------------------------------------------|--|--------------------------------|--|----------------------------------------------|--|---------|--|---------|--|---------|--|--------------|--|
| M/V ERLE                                          |  | DDT/DELIVNOTE GB/3335                       |  | C71                                     | C72  | C73                      | C74 | C75                                       | C76  | C77                        | C78 | C87   |                                                    |                                              |  |                                |  |                                              |  |         |  |         |  |         |  |              |  |
|                                                   |  |                                             |  | C %                                     | Mn % | Si %                     | P % | S %                                       | Al % | Cu %                       | N % | CEV   |                                                    |                                              |  |                                |  |                                              |  |         |  |         |  |         |  |              |  |
|                                                   |  |                                             |  | C79                                     | C80  | C81                      | C82 | C83                                       | C84  | C85                        | C86 |       |                                                    |                                              |  |                                |  |                                              |  |         |  |         |  |         |  |              |  |
|                                                   |  |                                             |  | Cr %                                    | Ni % | Mo %                     | V % | Nb %                                      | Sn % | Ti %                       | B % |       |                                                    |                                              |  |                                |  |                                              |  |         |  |         |  |         |  |              |  |
| B01 Prodotto e Dimensioni / Product and Dimension |  |                                             |  | B11 B02 Qualità acciaio / Steel Grade   |      |                          |     | B08 N. Fasci / Number of Bundles          |      | B10 Lunghezza / Lenght (m) |     |       | CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES |                                              |  |                                |  |                                              |  |         |  |         |  |         |  |              |  |
| Norma del prodotto / Standard product             |  | Norma qualità / Standard quality            |  | B08 N. Barre / Number of Pieces         |      | B13 Quantità / Mass (Kg) |     | C11 Snervamento Yield point ReH - N / mm² |      |                            |     |       |                                                    | C12 Resistenza Tensile strength Rm - N / mm² |  | C13 Allungamento Elongation A% |  | C40 Prova di Resilienza - Impact Test KV (J) |  |         |  |         |  |         |  |              |  |
| B07 Colata - Lotto / Heat - Item                  |  | A07 Ordine cliente N. / Customer's order N. |  | A08 Nostro ordine N. / Our Order N.     |      | C41 h (mm)               |     |                                           |      |                            |     |       |                                                    |                                              |  |                                |  | C42 KV1                                      |  | C42 KV2 |  | C42 KV3 |  | C43 KVm |  | C03 Temp. °C |  |
|                                                   |  | (*)                                         |  |                                         |      |                          |     |                                           |      |                            |     |       |                                                    |                                              |  |                                |  |                                              |  |         |  |         |  |         |  |              |  |
| HEA 280                                           |  | S275J0 +AR                                  |  | 1                                       |      | 12,10                    |     | 0,14                                      |      | 0,54                       |     | 0,22  |                                                    | 0,013                                        |  | 0,0040                         |  | 0,006                                        |  | 0,326   |  | 0,011   |  | 0,309   |  |              |  |
| EN 10365                                          |  | EN10025-2/EN10034                           |  | 6                                       |      | 5.644                    |     | 0,140                                     |      | 0,196                      |     | 0,039 |                                                    | 0,001                                        |  |                                |  | 0,027                                        |  |         |  |         |  |         |  |              |  |
| No. 139399B                                       |  | G 2008107 BUCURESTI                         |  |                                         |      | 43/000894                |     | 323                                       |      | 469                        |     | 34    |                                                    | 10,0                                         |  | 162,0                          |  | 155,0                                        |  | 143,0   |  | 153,3   |  | 0       |  |              |  |
| HEA 280                                           |  | S275J0 +AR                                  |  | 1                                       |      | 12,10                    |     | 0,14                                      |      | 0,54                       |     | 0,22  |                                                    | 0,013                                        |  | 0,0040                         |  | 0,006                                        |  | 0,326   |  | 0,011   |  | 0,309   |  |              |  |
| EN 10365                                          |  | EN10025-2/EN10034                           |  | 6                                       |      | 5.644                    |     | 0,140                                     |      | 0,196                      |     | 0,039 |                                                    | 0,001                                        |  |                                |  | 0,027                                        |  |         |  |         |  |         |  |              |  |
| No. 139399B                                       |  | G 2008107 BUCURESTI                         |  |                                         |      | 43/000894                |     | 323                                       |      | 469                        |     | 34    |                                                    | 10,0                                         |  | 162,0                          |  | 155,0                                        |  | 143,0   |  | 153,3   |  | 0       |  |              |  |
| HEA 280                                           |  | S275J0 +AR                                  |  | 1                                       |      | 12,10                    |     | 0,15                                      |      | 0,54                       |     | 0,18  |                                                    | 0,014                                        |  | 0,0040                         |  | 0,005                                        |  | 0,346   |  | 0,010   |  | 0,315   |  |              |  |
| EN 10365                                          |  | EN10025-2/EN10034                           |  | 6                                       |      | 5.644                    |     | 0,139                                     |      | 0,219                      |     | 0,042 |                                                    | 0,002                                        |  |                                |  | 0,025                                        |  |         |  |         |  |         |  |              |  |
| No. 139400A                                       |  | G 2008107 BUCURESTI                         |  |                                         |      | 43/000894                |     | 328                                       |      | 473                        |     | 34    |                                                    | 10,0                                         |  | 151,0                          |  | 145,0                                        |  | 159,0   |  | 151,7   |  | 0       |  |              |  |
| HEA 280                                           |  | S275J0 +AR                                  |  | 1                                       |      | 12,10                    |     | 0,15                                      |      | 0,54                       |     | 0,18  |                                                    | 0,014                                        |  | 0,0040                         |  | 0,005                                        |  | 0,346   |  | 0,010   |  | 0,315   |  |              |  |
| EN 10365                                          |  | EN10025-2/EN10034                           |  | 6                                       |      | 5.644                    |     | 0,139                                     |      | 0,219                      |     | 0,042 |                                                    | 0,002                                        |  |                                |  | 0,025                                        |  |         |  |         |  |         |  |              |  |
| No. 139400A                                       |  | G 2008107 BUCURESTI                         |  |                                         |      | 43/000894                |     | 328                                       |      | 473                        |     | 34    |                                                    | 10,0                                         |  | 151,0                          |  | 145,0                                        |  | 159,0   |  | 151,7   |  | 0       |  |              |  |
| HEA 280                                           |  | S275J0 +AR                                  |  | 1                                       |      | 12,10                    |     | 0,15                                      |      | 0,55                       |     | 0,18  |                                                    | 0,016                                        |  | 0,0090                         |  | 0,005                                        |  | 0,368   |  | 0,010   |  | 0,325   |  |              |  |
| EN 10365                                          |  | EN10025-2/EN10034                           |  | 6                                       |      | 5.644                    |     | 0,155                                     |      | 0,225                      |     | 0,052 |                                                    | 0,001                                        |  |                                |  | 0,024                                        |  |         |  |         |  |         |  |              |  |
| No. 139401A                                       |  | G 2008107 BUCURESTI                         |  |                                         |      | 43/000894                |     | 319                                       |      | 473                        |     | 35    |                                                    | 10,0                                         |  | 112,0                          |  | 113,0                                        |  | 116,0   |  | 113,7   |  | 0       |  |              |  |
| IPE 500                                           |  | S275J0 +AR                                  |  | 1                                       |      | 12,10                    |     | 0,14                                      |      | 0,52                       |     | 0,19  |                                                    | 0,011                                        |  | 0,0050                         |  | 0,006                                        |  | 0,442   |  | 0,011   |  | 0,309   |  |              |  |
| EN 10365                                          |  | EN10025-2/EN10034                           |  | 4                                       |      | 4.237                    |     | 0,118                                     |      | 0,165                      |     | 0,042 |                                                    | 0,002                                        |  |                                |  | 0,021                                        |  |         |  |         |  |         |  |              |  |
| No. 137806B                                       |  | G 2008107 BUCURESTI                         |  |                                         |      | 43/000894                |     | 344                                       |      | 472                        |     | 33    |                                                    | 10,0                                         |  | 142,0                          |  | 140,0                                        |  | 146,0   |  | 142,7   |  | 0       |  |              |  |
| IPE 500                                           |  | S275J0 +AR                                  |  | 1                                       |      | 12,10                    |     | 0,14                                      |      | 0,55                       |     | 0,20  |                                                    | 0,014                                        |  | 0,0070                         |  | 0,005                                        |  | 0,354   |  | 0,011   |  | 0,302   |  |              |  |
| EN 10365                                          |  | EN10025-2/EN10034                           |  | 4                                       |      | 4.237                    |     | 0,127                                     |      | 0,136                      |     | 0,028 |                                                    | 0,001                                        |  |                                |  | 0,023                                        |  |         |  |         |  |         |  |              |  |
| No. 137820A                                       |  | G 2008107 BUCURESTI                         |  |                                         |      | 43/000894                |     | 349                                       |      | 476                        |     | 34    |                                                    | 10,0                                         |  | 173,0                          |  | 167,0                                        |  | 157,0   |  | 165,7   |  | 0       |  |              |  |
| IPE 500                                           |  | S275J0 +AR                                  |  | 1                                       |      | 12,10                    |     | 0,14                                      |      | 0,54                       |     | 0,18  |                                                    | 0,015                                        |  | 0,0080                         |  | 0,004                                        |  | 0,380   |  | 0,010   |  | 0,305   |  |              |  |
| EN 10365                                          |  | EN10025-2/EN10034                           |  | 4                                       |      | 4.237                    |     | 0,122                                     |      | 0,149                      |     | 0,036 |                                                    | 0,002                                        |  |                                |  | 0,023                                        |  |         |  |         |  |         |  |              |  |
| No. 137824A                                       |  | G 2008107 BUCURESTI                         |  |                                         |      | 43/000894                |     | 335                                       |      | 473                        |     | 33    |                                                    | 10,0                                         |  | 148,0                          |  | 144,0                                        |  | 146,0   |  | 146,0   |  | 0       |  |              |  |
|                                                   |  |                                             |  |                                         |      |                          |     |                                           |      |                            |     |       |                                                    |                                              |  |                                |  |                                              |  |         |  |         |  |         |  |              |  |
|                                                   |  |                                             |  |                                         |      |                          |     |                                           |      |                            |     |       |                                                    |                                              |  |                                |  |                                              |  |         |  |         |  |         |  |              |  |
|                                                   |  |                                             |  |                                         |      |                          |     |                                           |      |                            |     |       |                                                    |                                              |  |                                |  |                                              |  |         |  |         |  |         |  |              |  |

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilit : Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilit : Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.  
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined.  
Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(\*) Stabilimento produttore  
G = Giammoro (ME)  
P = Pallanzeno (VB)

Marchio del produttore



Quality Manager  
Daniele Lombardo

*Daniele Lombardo*





CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A06 CLIENTE / CUSTOMER:

A02 Normativa EN 10204 3.1  
A03 Numero: 003335 2023 del 9/06/23  
Pag. 2  
Your Ref.: 2008107 BUCURESTI / 4/05/23

THYSSENKRUPP MATERIALS ROMANIA SRL  
BD.BASARABIA NR. 256, FORJA PRESE,  
03035 BUCHAREST (RO)

012427

| DdT / SHIPPING DOCUMENT:                          |   |                                             |                                     | ANALISI CHIMICHE / CHEMICAL COMPOSITION |                                                    |                                              |                                |                                              |         |         |         |         |              |
|---------------------------------------------------|---|---------------------------------------------|-------------------------------------|-----------------------------------------|----------------------------------------------------|----------------------------------------------|--------------------------------|----------------------------------------------|---------|---------|---------|---------|--------------|
| M/V ERLE                                          |   | DDT/DELIVNOTE GB/3335                       |                                     | C71                                     | C72                                                | C73                                          | C74                            | C75                                          | C76     | C77     | C78     | C87     |              |
|                                                   |   |                                             |                                     | C79                                     | C80                                                | C81                                          | C82                            | C83                                          | C84     | C85     | C86     |         |              |
| B01 Prodotto e Dimensioni / Product and Dimension |   | B11 B02 Qualità acciaio / Steel Grade       | B08 N. Fasci / Number of Bundles    | B10 Lunghezza / Lenght (m)              | CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES |                                              |                                |                                              |         |         |         |         |              |
| Norma del prodotto / Standard product             |   | Norma qualità / Standard quality            | B08 N. Barre / Number of Pieces     | B13 Quantità / Mass (Kg)                | C11 Snervamento Yield point ReH - N / mm²          | C12 Resistenza Tensile strength Rm - N / mm² | C13 Allungamento Elongation A% | C40 Prova di Resilienza - Impact Test KV (J) |         |         |         |         |              |
| B07 Colata - Lotto / Heat - Item                  |   | A07 Ordine cliente N. / Customer's order N. | A08 Nostro ordine N. / Our Order N. |                                         |                                                    |                                              |                                | C41 h (mm)                                   | C42 KV1 | C42 KV2 | C42 KV3 | C43 KVm | C03 Temp. °C |
|                                                   |   |                                             |                                     | (*)                                     |                                                    |                                              |                                |                                              |         |         |         |         |              |
| IPE 500                                           |   | S275J0 +AR                                  | 1                                   | 12,10                                   | 0,14                                               | 0,53                                         | 0,20                           | 0,017                                        | 0,0040  | 0,007   | 0,396   | 0,009   | 0,310        |
| EN 10365                                          |   | EN10025-2/EN10034                           | 4                                   | 4.237                                   | 0,136                                              | 0,165                                        | 0,033                          | 0,002                                        |         | 0,026   |         |         |              |
| No. 139702A                                       | G | 2008107 BUCURESTI                           |                                     | 43/000894                               | 344                                                | 472                                          | 34                             | 10,0                                         | 150,0   | 149,0   | 157,0   | 152,0   | 0            |
| IPE 500                                           |   | S275J0 +AR                                  | 1                                   | 12,10                                   | 0,14                                               | 0,53                                         | 0,20                           | 0,017                                        | 0,0040  | 0,007   | 0,396   | 0,009   | 0,310        |
| EN 10365                                          |   | EN10025-2/EN10034                           | 4                                   | 4.237                                   | 0,136                                              | 0,165                                        | 0,033                          | 0,002                                        |         | 0,026   |         |         |              |
| No. 139702B                                       | G | 2008107 BUCURESTI                           |                                     | 43/000894                               | 342                                                | 469                                          | 35                             | 10,0                                         | 152,0   | 147,0   | 153,0   | 150,7   | 0            |
| IPE 500                                           |   | S275J0 +AR                                  | 1                                   | 12,10                                   | 0,14                                               | 0,55                                         | 0,19                           | 0,013                                        | 0,0040  | 0,007   | 0,439   | 0,009   | 0,314        |
| EN 10365                                          |   | EN10025-2/EN10034                           | 4                                   | 4.237                                   | 0,124                                              | 0,199                                        | 0,039                          | 0,002                                        |         | 0,025   |         |         |              |
| No. 139704A                                       | G | 2008107 BUCURESTI                           |                                     | 43/000894                               | 345                                                | 475                                          | 35                             | 10,0                                         | 143,0   | 148,0   | 147,0   | 146,0   | 0            |
| IPE 500                                           |   | S275J0 +AR                                  | 1                                   | 12,10                                   | 0,14                                               | 0,54                                         | 0,21                           | 0,014                                        | 0,0080  | 0,006   | 0,413   | 0,009   | 0,306        |
| EN 10365                                          |   | EN10025-2/EN10034                           | 4                                   | 4.238                                   | 0,111                                              | 0,183                                        | 0,037                          | 0,002                                        |         | 0,022   |         |         |              |
| No. 139705A                                       | G | 2008107 BUCURESTI                           |                                     | 43/000894                               | 346                                                | 481                                          | 34                             | 10,0                                         | 135,0   | 138,0   | 130,0   | 134,3   | 0            |
| HEA 300                                           |   | S355J2 +AR                                  | 1                                   | 12,10                                   | 0,10                                               | 1,15                                         | 0,18                           | 0,012                                        | 0,0060  | 0,026   | 0,391   | 0,011   | 0,368        |
| EN 10365                                          |   | EN 10025-2/EN10034                          | 6                                   | 6.327                                   | 0,098                                              | 0,147                                        | 0,028                          | 0,040                                        | 0,003   | 0,018   | 0,002   | 0,0004  |              |
| No. 137757A                                       | G | 2008107 BUCURESTI                           |                                     | 43/000894                               | 383                                                | 503                                          | 31                             | 10,0                                         | 189,0   | 193,0   | 201,0   | 194,3   | - 20         |
| HEA 300                                           |   | S355J2 +AR                                  | 1                                   | 12,10                                   | 0,15                                               | 1,28                                         | 0,18                           | 0,013                                        | 0,0120  | 0,028   | 0,393   | 0,010   | 0,431        |
| EN 10365                                          |   | EN 10025-2/EN10034                          | 6                                   | 6.327                                   | 0,106                                              | 0,172                                        | 0,036                          | 0,003                                        | 0,002   | 0,024   | 0,025   | 0,0004  |              |
| No. 139280A                                       | G | 2008107 BUCURESTI                           |                                     | 43/000894                               | 380                                                | 532                                          | 30                             | 10,0                                         | 183,0   | 184,0   | 182,0   | 183,0   | - 20         |
| HEA 300                                           |   | S355J2 +AR                                  | 1                                   | 12,10                                   | 0,15                                               | 1,28                                         | 0,18                           | 0,013                                        | 0,0120  | 0,028   | 0,393   | 0,010   | 0,431        |
| EN 10365                                          |   | EN 10025-2/EN10034                          | 6                                   | 6.327                                   | 0,106                                              | 0,172                                        | 0,036                          | 0,003                                        | 0,002   | 0,024   | 0,025   | 0,0004  |              |
| No. 139280B                                       | G | 2008107 BUCURESTI                           |                                     | 43/000894                               | 377                                                | 530                                          | 31                             | 10,0                                         | 181,0   | 186,0   | 188,0   | 185,0   | - 20         |
| HEA 300                                           |   | S355J2 +AR                                  | 1                                   | 12,10                                   | 0,15                                               | 1,28                                         | 0,18                           | 0,013                                        | 0,0120  | 0,028   | 0,393   | 0,010   | 0,431        |
| EN 10365                                          |   | EN 10025-2/EN10034                          | 6                                   | 6.327                                   | 0,106                                              | 0,172                                        | 0,036                          | 0,003                                        | 0,002   | 0,024   | 0,025   | 0,0004  |              |
| No. 139280B                                       | G | 2008107 BUCURESTI                           |                                     | 43/000894                               | 377                                                | 530                                          | 31                             | 10,0                                         | 181,0   | 186,0   | 188,0   | 185,0   | - 20         |
|                                                   |   |                                             |                                     |                                         |                                                    |                                              |                                |                                              |         |         |         |         |              |
|                                                   |   |                                             |                                     |                                         |                                                    |                                              |                                |                                              |         |         |         |         |              |
|                                                   |   |                                             |                                     |                                         |                                                    |                                              |                                |                                              |         |         |         |         |              |

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.  
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined. Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(\*) Stabilimento produttore  
G = Giammoro (ME)  
P = Pallanzeno (VB)

Marchio del produttore



Quality Manager  
Daniele Lombardo

*Daniele Lombardo*



CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A06

CLIENTE / CUSTOMER:

DUFERCO TRAVI E PROFILATI S.p.A.

SOCIETÀ A SOCIO UNICO  
SEDE LEGALE ED AMMINISTRATIVA  
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)  
TEL 030216911 – FAX (Dir) 0302667598 (Amm) 0302169254  
PARTITA IVA IT 03386150175  
CODICE FISCALE 01711290062  
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062  
CAPITALE SOCIALE € 154.505.000,00 I.V.  
**STABILIMENTO DI GIAMMORO**  
98040 GIAMMORO (ME) ZONA INDUSTRIALE  
TEL. 0909386111 R.A. – FAX. 0909384229

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 003335 2023 **del** 9/06/23

Pag. 3

**Your Ref.:** 2008107 BUCURESTI / 4/05/23

THYSSENKRUPP MATERIALS ROMANIA SRL

BD.BASARABIA NR. 256, FORJA PRESE,

03035 BUCHAREST (RO)

012427

| DdT / SHIPPING DOCUMENT:                          |  |                       |  | ANALISI CHIMICHE / CHEMICAL COMPOSITION     |      |      |     |                                     |      |      |     |                            |  |  |  |                                                    |  |  |  |            |  |  |  |                                              |  |  |  |         |  |  |  |                                |  |  |  |         |  |  |  |                                              |  |  |  |         |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 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|                                                   |  |                       |  | C79                                         | C80  | C81  | C82 | C83                                 | C84  | C85  | C86 |                            |  |  |  |                                                    |  |  |  |            |  |  |  |                                              |  |  |  |         |  |  |  |                                |  |  |  |         |  |  |  |                                              |  |  |  |         |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 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Fasci / Number of Bundles    |      |      |     | B10 Lunghezza / Lenght (m) |  |  |  | CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES |  |  |  |            |  |  |  |                                              |  |  |  |         |  |  |  |                                |  |  |  |         |  |  |  |                                              |  |  |  |         |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  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| Norma del prodotto / Standard product             |  |                       |  | Norma qualità / Standard quality            |      |      |     | B08 N. Barre / Number of Pieces     |      |      |     | B13 Quantità / Mass (Kg)   |  |  |  | C11 Snervamento Yield point ReH = N / mm²          |  |  |  |            |  |  |  | C12 Resistenza Tensile strenght Rm = N / mm² |  |  |  |         |  |  |  | C13 Allungamento Elongation A% |  |  |  |         |  |  |  | C40 Prova di Resilienza - Impact Test KV (J) |  |  |  |         |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  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| B07 Colata - Lotto / Heat - Item                  |  |                       |  | A07 Ordine cliente N. / Customer's order N. |      |      |     | A08 Nostro ordine N. / Our Order N. |      |      |     |                            |  |  |  |                                                    |  |  |  | C41 h (mm) |  |  |  |                                              |  |  |  | C42 KV1 |  |  |  |                                |  |  |  | C42 KV2 |  |  |  |                                              |  |  |  | C42 KV3 |  |  |  |  |  |  |  | C43 KVm |  |  |  |  |  |  |  | C03 Temp. °C |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 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RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.  
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined.  
Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(\*) Stabilimento produttore  
G = Giammoro (ME)  
P = Pallanzeno (VB)

Marchio del produttore



Quality Manager  
Daniele Lombardo





CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A06

CLIENTE / CUSTOMER:

DUFERCO TRAVI E PROFILATI S.p.A.

SOCIETÀ A SOCIO UNICO  
SEDE LEGALE ED AMMINISTRATIVA  
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)  
TEL 030216911 – FAX (Dir) 0302667598 (Amm) 0302169254  
PARTITA IVA IT 03386150175  
CODICE FISCALE 01711290062  
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062  
CAPITALE SOCIALE € 154.505.000,00 I.V.  
**STABILIMENTO DI GIAMMORO**  
98040 GIAMMORO (ME) ZONA INDUSTRIALE  
TEL. 0909386111 R.A. – FAX. 0909384229

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 003335 2023 **del** 9/06/23

Pag. 4

**Your Ref.:** 2008107 BUCURESTI / 4/05/23

THYSSENKRUPP MATERIALS ROMANIA SRL

BD.BASARABIA NR. 256, FORJA PRESE,

03035 BUCHAREST (RO)

012427

| DdT / SHIPPING DOCUMENT:                          |   |                                             |                                     | ANALISI CHIMICHE / CHEMICAL COMPOSITION |                                                    |                                              |                                |                                              |         |         |         |         |              |
|---------------------------------------------------|---|---------------------------------------------|-------------------------------------|-----------------------------------------|----------------------------------------------------|----------------------------------------------|--------------------------------|----------------------------------------------|---------|---------|---------|---------|--------------|
| M/V ERLE                                          |   | DDT/DELIVNOTE GB/3335                       |                                     | C71                                     | C72                                                | C73                                          | C74                            | C75                                          | C76     | C77     | C78     | C87     |              |
|                                                   |   |                                             |                                     | C79                                     | C80                                                | C81                                          | C82                            | C83                                          | C84     | C85     | C86     |         |              |
| B01 Prodotto e Dimensioni / Product and Dimension |   | B11 B02 Qualità acciaio / Steel Grade       | B08 N. Fasci / Number of Bundles    | B10 Lunghezza / Lenght (m)              | CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES |                                              |                                |                                              |         |         |         |         |              |
| Norma del prodotto / Standard product             |   | Norma qualità / Standard quality            | B08 N. Barre / Number of Pieces     | B13 Quantità / Mass (Kg)                | C11 Snervamento Yield point ReH – N / mm²          | C12 Resistenza Tensile strength Rm – N / mm² | C13 Allungamento Elongation A% | C40 Prova di Resilienza - Impact Test KV (J) |         |         |         |         |              |
| B07 Colata - Lotto / Heat - Item                  |   | A07 Ordine cliente N. / Customer's order N. | A08 Nostro ordine N. / Our Order N. |                                         |                                                    |                                              |                                | C41 h (mm)                                   | C42 KV1 | C42 KV2 | C42 KV3 | C43 KVm | C03 Temp. °C |
|                                                   |   |                                             |                                     | (*)                                     |                                                    |                                              |                                |                                              |         |         |         |         |              |
| HEA 280                                           |   | S355J2 +AR                                  | 1                                   | 12,10                                   | 0,15                                               | 1,25                                         | 0,20                           | 0,018                                        | 0,0020  | 0,022   | 0,412   | 0,009   | 0,437        |
| EN 10365                                          |   | EN 10025-2/EN10034                          | 6                                   | 5.620                                   | 0,146                                              | 0,176                                        | 0,039                          | 0,003                                        | 0,002   | 0,022   | 0,022   | 0,0003  |              |
| No. 139395A                                       | G | 2008107 BUCURESTI                           | 43/000894                           |                                         | 365                                                | 519                                          | 34                             | 10,0                                         | 155,0   | 154,0   | 153,0   | 154,0   | - 20         |
| HEA 280                                           |   | S355J2 +AR                                  | 1                                   | 12,10                                   | 0,15                                               | 1,25                                         | 0,20                           | 0,018                                        | 0,0020  | 0,022   | 0,412   | 0,009   | 0,437        |
| EN 10365                                          |   | EN 10025-2/EN10034                          | 6                                   | 5.620                                   | 0,146                                              | 0,176                                        | 0,039                          | 0,003                                        | 0,002   | 0,022   | 0,022   | 0,0003  |              |
| No. 139395B                                       | G | 2008107 BUCURESTI                           | 43/000894                           |                                         | 363                                                | 517                                          | 35                             | 10,0                                         | 151,0   | 157,0   | 159,0   | 155,7   | - 20         |
| HEA 280                                           |   | S355J2 +AR                                  | 1                                   | 12,10                                   | 0,15                                               | 1,25                                         | 0,20                           | 0,018                                        | 0,0020  | 0,022   | 0,412   | 0,009   | 0,437        |
| EN 10365                                          |   | EN 10025-2/EN10034                          | 6                                   | 5.620                                   | 0,146                                              | 0,176                                        | 0,039                          | 0,003                                        | 0,002   | 0,022   | 0,022   | 0,0003  |              |
| No. 139395B                                       | G | 2008107 BUCURESTI                           | 43/000894                           |                                         | 363                                                | 517                                          | 35                             | 10,0                                         | 151,0   | 157,0   | 159,0   | 155,7   | - 20         |
| HEA 220                                           |   | S275J0 +AR                                  | 1                                   | 12,10                                   | 0,09                                               | 0,62                                         | 0,17                           | 0,015                                        | 0,0090  | 0,006   | 0,453   | 0,010   | 0,276        |
| EN 10365                                          |   | EN10025-2/EN10034                           | 12                                  | 7.281                                   | 0,136                                              | 0,190                                        | 0,041                          | 0,002                                        |         | 0,021   |         |         |              |
| No. 138324C                                       | G | 2008107 BUCURESTI                           | 43/000894                           |                                         | 327                                                | 438                                          | 33                             | 7,5                                          | 132,0   | 127,0   | 139,0   | 132,7   | 0            |
| HEA 220                                           |   | S275J0 +AR                                  | 1                                   | 12,10                                   | 0,09                                               | 0,64                                         | 0,18                           | 0,010                                        | 0,0060  | 0,007   | 0,323   | 0,011   | 0,258        |
| EN 10365                                          |   | EN10025-2/EN10034                           | 12                                  | 7.280                                   | 0,090                                              | 0,137                                        | 0,028                          | 0,001                                        |         | 0,020   |         |         |              |
| No. 139198A                                       | G | 2008107 BUCURESTI                           | 43/000894                           |                                         | 304                                                | 441                                          | 35                             | 7,5                                          | 147,0   | 167,0   | 170,0   | 161,3   | 0            |
| HEA 220                                           |   | S275J0 +AR                                  | 1                                   | 12,10                                   | 0,09                                               | 0,64                                         | 0,18                           | 0,010                                        | 0,0060  | 0,007   | 0,323   | 0,011   | 0,258        |
| EN 10365                                          |   | EN10025-2/EN10034                           | 12                                  | 7.281                                   | 0,090                                              | 0,137                                        | 0,028                          | 0,001                                        |         | 0,020   |         |         |              |
| No. 139198A                                       | G | 2008107 BUCURESTI                           | 43/000894                           |                                         | 304                                                | 441                                          | 35                             | 7,5                                          | 147,0   | 167,0   | 170,0   | 161,3   | 0            |
| HEB 240                                           |   | S275J0 +AR                                  | 1                                   | 12,10                                   | 0,14                                               | 0,54                                         | 0,18                           | 0,011                                        | 0,0060  | 0,006   | 0,438   | 0,009   | 0,305        |
| EN 10365                                          |   | EN10025-2/EN10034                           | 6                                   | 5.998                                   | 0,084                                              | 0,179                                        | 0,038                          | 0,001                                        |         | 0,023   |         |         |              |
| No. 139874A                                       | G | 2008107 BUCURESTI                           | 43/000894                           |                                         | 316                                                | 463                                          | 33                             | 10,0                                         | 110,0   | 96,0    | 95,0    | 100,3   | 0            |
| HEA 450                                           |   | S355J2 +AR                                  | 1                                   | 12,10                                   | 0,14                                               | 1,25                                         | 0,20                           | 0,019                                        | 0,0040  | 0,027   | 0,404   | 0,009   | 0,429        |
| EN 10365                                          |   | EN 10025-2/EN10034                          | 3                                   | 5.080                                   | 0,142                                              | 0,181                                        | 0,038                          | 0,004                                        | 0,001   | 0,025   | 0,020   | 0,0004  |              |
| No. 139675A                                       | G | 2008107 BUCURESTI                           | 43/000894                           |                                         | 364                                                | 513                                          | 30                             | 10,0                                         | 202,0   | 200,0   | 194,0   | 198,7   | - 20         |
|                                                   |   |                                             |                                     |                                         |                                                    |                                              |                                |                                              |         |         |         |         |              |
|                                                   |   |                                             |                                     |                                         |                                                    |                                              |                                |                                              |         |         |         |         |              |
|                                                   |   |                                             |                                     |                                         |                                                    |                                              |                                |                                              |         |         |         |         |              |

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.  
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined.  
Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(\*) Stabilimento produttore  
G = Giammoro (ME)  
P = Pallanzeno (VB)

Marchio del produttore



Quality Manager  
Daniele Lombardo



CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A06

CLIENTE / CUSTOMER:

DUFERCO TRAVI E PROFILATI S.p.A.

SOCIETÀ A SOCIO UNICO  
SEDE LEGALE ED AMMINISTRATIVA  
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)  
TEL 030216911 – FAX (Dir) 0302667598 (Amm) 0302169254  
PARTITA IVA IT 03386150175  
CODICE FISCALE 01711290062  
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062  
CAPITALE SOCIALE € 154.505.000,00 I.V.  
**STABILIMENTO DI GIAMMORO**  
98040 GIAMMORO (ME) ZONA INDUSTRIALE  
TEL. 0909386111 R.A. – FAX. 0909384229

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 003335 2023 **del** 9/06/23

Pag. 5

**Your Ref.:** 2008107 BUCURESTI / 4/05/23

THYSSENKRUPP MATERIALS ROMANIA SRL

BD.BASARABIA NR. 256, FORJA PRESE,

03035 BUCHAREST (RO)

012427

| DdT / SHIPPING DOCUMENT:                          |  |                       |  | ANALISI CHIMICHE / CHEMICAL COMPOSITION     |      |      |     |                                     |      |      |     |                            |  |  |  |                                                    |  |  |  |            |  |  |  |                                              |  |  |  |         |  |  |  |                                |  |  |  |         |  |  |  |                                              |  |  |  |         |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 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|                                                   |  |                       |  | C79                                         | C80  | C81  | C82 | C83                                 | C84  | C85  | C86 |                            |  |  |  |                                                    |  |  |  |            |  |  |  |                                              |  |  |  |         |  |  |  |                                |  |  |  |         |  |  |  |                                              |  |  |  |         |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 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Fasci / Number of Bundles    |      |      |     | B10 Lunghezza / Lenght (m) |  |  |  | CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES |  |  |  |            |  |  |  |                                              |  |  |  |         |  |  |  |                                |  |  |  |         |  |  |  |                                              |  |  |  |         |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  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Barre / Number of Pieces     |      |      |     | B13 Quantità / Mass (Kg)   |  |  |  | C11 Snervamento Yield point ReH - N / mm²          |  |  |  |            |  |  |  | C12 Resistenza Tensile strenght Rm - N / mm² |  |  |  |         |  |  |  | C13 Allungamento Elongation A% |  |  |  |         |  |  |  | C40 Prova di Resilienza - Impact Test KV (J) |  |  |  |         |  |  |  |  |  |  |  |         |  |  |  |  |  |  |  |              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  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| B07 Colata - Lotto / Heat - Item                  |  |                       |  | A07 Ordine cliente N. / Customer's order N. |      |      |     | A08 Nostro ordine N. / Our Order N. |      |      |     |                            |  |  |  |                                                    |  |  |  | C41 h (mm) |  |  |  |                                              |  |  |  | C42 KV1 |  |  |  |                                |  |  |  | C42 KV2 |  |  |  |                                              |  |  |  | C42 KV3 |  |  |  |  |  |  |  | C43 KVm |  |  |  |  |  |  |  | C03 Temp. °C |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 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RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.  
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined.  
Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(\*) Stabilimento produttore  
G = Giammoro (ME)  
P = Pallanzeno (VB)

Marchio del produttore



Quality Manager  
Daniele Lombardo

*Daniele Lombardo*



CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A06

CLIENTE / CUSTOMER:

DUFERCO TRAVI E PROFILATI S.p.A.

SOCIETÀ A SOCIO UNICO  
SEDE LEGALE ED AMMINISTRATIVA  
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)  
TEL 030216911 – FAX (Dir) 0302667598 (Amm) 0302169254  
PARTITA IVA IT 03386150175  
CODICE FISCALE 01711290062  
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062  
CAPITALE SOCIALE € 154.505.000,00 I.V.  
**STABILIMENTO DI GIAMMORO**  
98040 GIAMMORO (ME) ZONA INDUSTRIALE  
TEL. 0909386111 R.A. – FAX. 0909384229

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 003335 2023 **del** 9/06/23

Pag. 6

**Your Ref.:** 2008107 BUCURESTI / 4/05/23

THYSSENKRUPP MATERIALS ROMANIA SRL

BD.BASARABIA NR. 256, FORJA PRESE,

03035 BUCHAREST (RO)

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|                                                   |  |                       |  | C79                                         | C80  | C81  | C82 | C83                                 | C84  | C85  | C86 |                          |                                  |  |                            |                                           |                                                    |  |  |  |  |         |  |  |  |                                              |  |  |  |  |  |         |  |  |  |                                |  |  |  |  |  |         |  |  |  |                                              |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 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Fasci / Number of Bundles |  | B10 Lunghezza / Lenght (m) |                                           | CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES |  |  |  |  |         |  |  |  |                                              |  |  |  |  |  |         |  |  |  |                                |  |  |  |  |  |         |  |  |  |                                              |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  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| Norma del prodotto / Standard product             |  |                       |  | Norma qualità / Standard quality            |      |      |     | B08 N. Barre / Number of Pieces     |      |      |     | B13 Quantità / Mass (Kg) |                                  |  |                            | C11 Snervamento Yield point ReH = N / mm² |                                                    |  |  |  |  |         |  |  |  | C12 Resistenza Tensile strenght Rm = N / mm² |  |  |  |  |  |         |  |  |  | C13 Allungamento Elongation A% |  |  |  |  |  |         |  |  |  | C40 Prova di Resilienza - Impact Test KV (J) |  |  |  |  |  |         |  |  |  |  |  |  |  |  |  |              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  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| B07 Colata - Lotto / Heat - Item                  |  |                       |  | A07 Ordine cliente N. / Customer's order N. |      |      |     | A08 Nostro ordine N. / Our Order N. |      |      |     | C41 h (mm)               |                                  |  |                            |                                           |                                                    |  |  |  |  | C42 KV1 |  |  |  |                                              |  |  |  |  |  | C42 KV2 |  |  |  |                                |  |  |  |  |  | C42 KV3 |  |  |  |                                              |  |  |  |  |  | C43 KVm |  |  |  |  |  |  |  |  |  | C03 Temp. °C |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 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RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.  
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined. Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(\*) Stabilimento produttore  
G = Giammoro (ME)  
P = Pallanzeno (VB)

Marchio del produttore



Quality Manager  
Daniele Lombardo





CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A06

CLIENTE / CUSTOMER:

A02

Normativa EN 10204 3.1

A03

Numero: 003335 2023 del 9/06/23

THYSSENKRUPP MATERIALS ROMANIA SRL

Pag. 7

BD.BASARABIA NR. 256, FORJA PRESE,

Your Ref.: 2008107 BUCURESTI / 4/05/23

03035 BUCHAREST (RO)

012427

| DdT / SHIPPING DOCUMENT:                          |  |                                         |  | ANALISI CHIMICHE / CHEMICAL COMPOSITION            |                                                |                                  |        |      |      |      |     |          |  |
|---------------------------------------------------|--|-----------------------------------------|--|----------------------------------------------------|------------------------------------------------|----------------------------------|--------|------|------|------|-----|----------|--|
| M/V ERLE                                          |  | DDT/DELIVNOTE GB/3335                   |  | C71                                                | C72                                            | C73                              | C74    | C75  | C76  | C77  | C78 | C87      |  |
|                                                   |  |                                         |  | C %                                                | Mn %                                           | Si %                             | P %    | S %  | Al % | Cu % | N % | CEV      |  |
|                                                   |  |                                         |  | C79                                                | C80                                            | C81                              | C82    | C83  | C84  | C85  | C86 |          |  |
|                                                   |  |                                         |  | Cr %                                               | Ni %                                           | Mo %                             | V %    | Nb % | Sn % | Ti % | B % |          |  |
| B01 Prodotto e Dimensioni / Product and Dimension |  |                                         |  | CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES |                                                |                                  |        |      |      |      |     |          |  |
| B11 B02                                           |  | B10                                     |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
| Qualità acciaio / Steel Grade                     |  | Lunghezza / Lenght (m)                  |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
| Norma del prodotto / Standard product             |  | Quantità / Mass (Kg)                    |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
| B07                                               |  | A07                                     |  | C40                                                |                                                |                                  |        |      |      |      |     |          |  |
| Colata - Lotto / Heat - Item                      |  | Ordine cliente N. / Customer's order N. |  | Prova di Resilienza - Impact Test KV (J)           |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  | A08                                     |  | C11                                                | C12                                            | C13                              | C41    | C42  | C42  | C42  | C43 | C03      |  |
|                                                   |  | Nostro ordine N. / Our Order N.         |  | Snervamento<br>Yield point<br>ReH - N / mm²        | Resistenza<br>Tensile strength<br>Rm - N / mm² | Allungamento<br>Elongation<br>A% | h (mm) | KV1  | KV2  | KV3  | KVm | Temp. °C |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
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|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |
|                                                   |  |                                         |  |                                                    |                                                |                                  |        |      |      |      |     |          |  |

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.  
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined. Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(\*) Stabilimento produttore  
G = Giammoro (ME)  
P = Pallanzeno (VB)

Marchio del produttore



Quality Manager  
Daniele Lombardo



CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A06

CLIENTE / CUSTOMER:

DUFERCO TRAVI E PROFILATI S.p.A.

SOCIETÀ A SOCIO UNICO  
SEDE LEGALE ED AMMINISTRATIVA  
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)  
TEL 030216911 – FAX (Dir) 0302667598 (Amm) 0302169254  
PARTITA IVA IT 03386150175  
CODICE FISCALE 01711290062  
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062  
CAPITALE SOCIALE € 154.505.000,00 I.V.  
**STABILIMENTO DI GIAMMORO**  
98040 GIAMMORO (ME) ZONA INDUSTRIALE  
TEL. 0909386111 R.A. – FAX. 0909384229

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 003335 2023 **del** 9/06/23

Pag. 8

**Your Ref.:** 2008107 BUCURESTI / 4/05/23

THYSSENKRUPP MATERIALS ROMANIA SRL

BD.BASARABIA NR. 256, FORJA PRESE,

03035 BUCHAREST (RO)

012427

| DdT / SHIPPING DOCUMENT:                          |  |                       |  | ANALISI CHIMICHE / CHEMICAL COMPOSITION     |     |     |     |                                     |     |     |     |                            |  |  |  |                                                    |  |  |  |                                              |  |  |  |                                |  |  |  |                                              |  |  |  |         |  |  |  |              |  |  |  |       |  |  |  |        |  |  |  |       |  |  |  |
|---------------------------------------------------|--|-----------------------|--|---------------------------------------------|-----|-----|-----|-------------------------------------|-----|-----|-----|----------------------------|--|--|--|----------------------------------------------------|--|--|--|----------------------------------------------|--|--|--|--------------------------------|--|--|--|----------------------------------------------|--|--|--|---------|--|--|--|--------------|--|--|--|-------|--|--|--|--------|--|--|--|-------|--|--|--|
| M/V ERLE                                          |  | DDT/DELIVNOTE GB/3335 |  | C71                                         | C72 | C73 | C74 | C75                                 | C76 | C77 | C78 | C87                        |  |  |  |                                                    |  |  |  |                                              |  |  |  |                                |  |  |  |                                              |  |  |  |         |  |  |  |              |  |  |  |       |  |  |  |        |  |  |  |       |  |  |  |
|                                                   |  |                       |  | C                                           | Mn  | Si  | P   | S                                   | Al  | Cu  | N   | CEV                        |  |  |  |                                                    |  |  |  |                                              |  |  |  |                                |  |  |  |                                              |  |  |  |         |  |  |  |              |  |  |  |       |  |  |  |        |  |  |  |       |  |  |  |
|                                                   |  |                       |  | C79                                         | C80 | C81 | C82 | C83                                 | C84 | C85 | C86 |                            |  |  |  |                                                    |  |  |  |                                              |  |  |  |                                |  |  |  |                                              |  |  |  |         |  |  |  |              |  |  |  |       |  |  |  |        |  |  |  |       |  |  |  |
|                                                   |  |                       |  | Cr                                          | Ni  | Mo  | V   | Nb                                  | Sn  | Ti  | B   |                            |  |  |  |                                                    |  |  |  |                                              |  |  |  |                                |  |  |  |                                              |  |  |  |         |  |  |  |              |  |  |  |       |  |  |  |        |  |  |  |       |  |  |  |
| B01 Prodotto e Dimensioni / Product and Dimension |  |                       |  | B11 B02 Qualità acciaio / Steel Grade       |     |     |     | B08 N. Fasci / Number of Bundles    |     |     |     | B10 Lunghezza / Lenght (m) |  |  |  | CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES |  |  |  |                                              |  |  |  |                                |  |  |  |                                              |  |  |  |         |  |  |  |              |  |  |  |       |  |  |  |        |  |  |  |       |  |  |  |
| Norma del prodotto / Standard product             |  |                       |  | Norma qualità / Standard quality            |     |     |     | B08 N. Barre / Number of Pieces     |     |     |     | B13 Quantità / Mass (Kg)   |  |  |  | C11 Snervamento Yield point ReH - N / mm²          |  |  |  | C12 Resistenza Tensile strenght Rm - N / mm² |  |  |  | C13 Allungamento Elongation A% |  |  |  | C40 Prova di Resilienza - Impact Test KV (J) |  |  |  |         |  |  |  |              |  |  |  |       |  |  |  |        |  |  |  |       |  |  |  |
| B07 Colata - Lotto / Heat - Item                  |  |                       |  | A07 Ordine cliente N. / Customer's order N. |     |     |     | A08 Nostro ordine N. / Our Order N. |     |     |     |                            |  |  |  | C41 h (mm)                                         |  |  |  | C42 KV1                                      |  |  |  | C42 KV2                        |  |  |  | C42 KV3                                      |  |  |  | C43 KVm |  |  |  | C03 Temp. °C |  |  |  |       |  |  |  |        |  |  |  |       |  |  |  |
|                                                   |  |                       |  | (*)                                         |     |     |     |                                     |     |     |     |                            |  |  |  |                                                    |  |  |  |                                              |  |  |  |                                |  |  |  |                                              |  |  |  |         |  |  |  |              |  |  |  |       |  |  |  |        |  |  |  |       |  |  |  |
| HEA 300                                           |  |                       |  | S275J0 +AR                                  |     |     |     | 1                                   |     |     |     | 12,10                      |  |  |  | 0,14                                               |  |  |  | 0,55                                         |  |  |  | 0,19                           |  |  |  | 0,010                                        |  |  |  | 0,0070  |  |  |  | 0,007        |  |  |  | 0,365 |  |  |  | 0,010  |  |  |  | 0,318 |  |  |  |
| EN 10365                                          |  |                       |  | EN10025-2/EN10034                           |     |     |     | 6                                   |     |     |     | 6.304                      |  |  |  | 0,137                                              |  |  |  | 0,266                                        |  |  |  | 0,043                          |  |  |  | 0,001                                        |  |  |  |         |  |  |  | 0,020        |  |  |  |       |  |  |  |        |  |  |  |       |  |  |  |
| No. 139948A                                       |  |                       |  | G 2008107 BUCURESTI                         |     |     |     |                                     |     |     |     | 43/000894                  |  |  |  | 315                                                |  |  |  | 464                                          |  |  |  | 33                             |  |  |  | 10,0                                         |  |  |  | 102,0   |  |  |  | 125,0        |  |  |  | 97,0  |  |  |  | 108,0  |  |  |  | 0     |  |  |  |
| HEA 300                                           |  |                       |  | S275J0 +AR                                  |     |     |     | 1                                   |     |     |     | 12,10                      |  |  |  | 0,14                                               |  |  |  | 0,55                                         |  |  |  | 0,19                           |  |  |  | 0,010                                        |  |  |  | 0,0070  |  |  |  | 0,007        |  |  |  | 0,365 |  |  |  | 0,010  |  |  |  | 0,318 |  |  |  |
| EN 10365                                          |  |                       |  | EN10025-2/EN10034                           |     |     |     | 6                                   |     |     |     | 6.304                      |  |  |  | 0,137                                              |  |  |  | 0,266                                        |  |  |  | 0,043                          |  |  |  | 0,001                                        |  |  |  |         |  |  |  | 0,020        |  |  |  |       |  |  |  |        |  |  |  |       |  |  |  |
| No. 139948A                                       |  |                       |  | G 2008107 BUCURESTI                         |     |     |     |                                     |     |     |     | 43/000894                  |  |  |  | 315                                                |  |  |  | 464                                          |  |  |  | 33                             |  |  |  | 10,0                                         |  |  |  | 102,0   |  |  |  | 125,0        |  |  |  | 97,0  |  |  |  | 108,0  |  |  |  | 0     |  |  |  |
| HEA 220                                           |  |                       |  | S355J2 +AR                                  |     |     |     | 1                                   |     |     |     | 12,10                      |  |  |  | 0,15                                               |  |  |  | 1,28                                         |  |  |  | 0,22                           |  |  |  | 0,012                                        |  |  |  | 0,0080  |  |  |  | 0,024        |  |  |  | 0,422 |  |  |  | 0,011  |  |  |  | 0,437 |  |  |  |
| EN 10365                                          |  |                       |  | EN 10025-2/EN10034                          |     |     |     | 5                                   |     |     |     | 3.005                      |  |  |  | 0,098                                              |  |  |  | 0,155                                        |  |  |  | 0,040                          |  |  |  | 0,003                                        |  |  |  | 0,003   |  |  |  | 0,026        |  |  |  | 0,018 |  |  |  | 0,0004 |  |  |  |       |  |  |  |
| No. 140077B                                       |  |                       |  | G 2008107 BUCURESTI                         |     |     |     |                                     |     |     |     | 43/000894                  |  |  |  | 362                                                |  |  |  | 517                                          |  |  |  | 32                             |  |  |  | 7,5                                          |  |  |  | 150,0   |  |  |  | 152,0        |  |  |  | 154,0 |  |  |  | 152,0  |  |  |  | - 20  |  |  |  |
| HEA 450                                           |  |                       |  | S275J0 +AR                                  |     |     |     | 1                                   |     |     |     | 12,10                      |  |  |  | 0,15                                               |  |  |  | 0,55                                         |  |  |  | 0,22                           |  |  |  | 0,015                                        |  |  |  | 0,0130  |  |  |  | 0,008        |  |  |  | 0,409 |  |  |  | 0,009  |  |  |  | 0,323 |  |  |  |
| EN 10365                                          |  |                       |  | EN10025-2/EN10034                           |     |     |     | 3                                   |     |     |     | 5.078                      |  |  |  | 0,138                                              |  |  |  | 0,187                                        |  |  |  | 0,045                          |  |  |  | 0,001                                        |  |  |  |         |  |  |  | 0,026        |  |  |  |       |  |  |  |        |  |  |  |       |  |  |  |
| No. 139742B                                       |  |                       |  | G 2008107 BUCURESTI                         |     |     |     |                                     |     |     |     | 43/000894                  |  |  |  | 315                                                |  |  |  | 460                                          |  |  |  | 34                             |  |  |  | 10,0                                         |  |  |  | 114,0   |  |  |  | 128,0        |  |  |  | 124,0 |  |  |  | 122,0  |  |  |  | 0     |  |  |  |
| HEB 400                                           |  |                       |  | S275J0 +AR                                  |     |     |     | 1                                   |     |     |     | 12,10                      |  |  |  | 0,14                                               |  |  |  | 0,53                                         |  |  |  | 0,18                           |  |  |  | 0,009                                        |  |  |  | 0,0050  |  |  |  | 0,006        |  |  |  | 0,334 |  |  |  | 0,010  |  |  |  | 0,294 |  |  |  |
| EN 10365                                          |  |                       |  | EN10025-2/EN10034                           |     |     |     | 3                                   |     |     |     | 5.623                      |  |  |  | 0,094                                              |  |  |  | 0,139                                        |  |  |  | 0,029                          |  |  |  | 0,001                                        |  |  |  |         |  |  |  | 0,021        |  |  |  |       |  |  |  |        |  |  |  |       |  |  |  |
| No. 137668C                                       |  |                       |  | G 2008107 BUCURESTI                         |     |     |     |                                     |     |     |     | 43/000894                  |  |  |  | 311                                                |  |  |  | 463                                          |  |  |  | 35                             |  |  |  | 10,0                                         |  |  |  | 143,0   |  |  |  | 145,0        |  |  |  | 135,0 |  |  |  | 141,0  |  |  |  | 0     |  |  |  |
| HEA 300                                           |  |                       |  | S355J2 +AR                                  |     |     |     | 1                                   |     |     |     | 12,10                      |  |  |  | 0,10                                               |  |  |  | 1,15                                         |  |  |  | 0,18                           |  |  |  | 0,012                                        |  |  |  | 0,0060  |  |  |  | 0,026        |  |  |  | 0,391 |  |  |  | 0,011  |  |  |  | 0,368 |  |  |  |
| EN 10365                                          |  |                       |  | EN 10025-2/EN10034                          |     |     |     | 6                                   |     |     |     | 6.406                      |  |  |  | 0,098                                              |  |  |  | 0,147                                        |  |  |  | 0,028                          |  |  |  | 0,040                                        |  |  |  | 0,003   |  |  |  | 0,018        |  |  |  | 0,002 |  |  |  | 0,0004 |  |  |  |       |  |  |  |
| No. 137757A                                       |  |                       |  | G 2008107 BUCURESTI                         |     |     |     |                                     |     |     |     | 43/000894                  |  |  |  | 383                                                |  |  |  | 503                                          |  |  |  | 31                             |  |  |  | 10,0                                         |  |  |  | 189,0   |  |  |  | 193,0        |  |  |  | 201,0 |  |  |  | 194,3  |  |  |  | - 20  |  |  |  |
| HEA 300                                           |  |                       |  | S355J2 +AR                                  |     |     |     | 1                                   |     |     |     | 12,10                      |  |  |  | 0,15                                               |  |  |  | 1,28                                         |  |  |  | 0,18                           |  |  |  | 0,013                                        |  |  |  | 0,0120  |  |  |  | 0,028        |  |  |  | 0,393 |  |  |  | 0,010  |  |  |  | 0,431 |  |  |  |
| EN 10365                                          |  |                       |  | EN 10025-2/EN10034                          |     |     |     | 6                                   |     |     |     | 6.406                      |  |  |  | 0,106                                              |  |  |  | 0,172                                        |  |  |  | 0,036                          |  |  |  | 0,003                                        |  |  |  | 0,002   |  |  |  | 0,024        |  |  |  | 0,025 |  |  |  | 0,0004 |  |  |  |       |  |  |  |
| No. 139280A                                       |  |                       |  | G 2008107 BUCURESTI                         |     |     |     |                                     |     |     |     | 43/000894                  |  |  |  | 380                                                |  |  |  | 532                                          |  |  |  | 30                             |  |  |  | 10,0                                         |  |  |  | 183,0   |  |  |  | 184,0        |  |  |  | 182,0 |  |  |  | 183,0  |  |  |  | - 20  |  |  |  |
| HEA 300                                           |  |                       |  | S355J2 +AR                                  |     |     |     | 1                                   |     |     |     | 12,10                      |  |  |  | 0,15                                               |  |  |  | 1,28                                         |  |  |  | 0,18                           |  |  |  | 0,013                                        |  |  |  | 0,0120  |  |  |  | 0,028        |  |  |  | 0,393 |  |  |  | 0,010  |  |  |  | 0,431 |  |  |  |
| EN 10365                                          |  |                       |  | EN 10025-2/EN10034                          |     |     |     | 6                                   |     |     |     | 6.407                      |  |  |  | 0,106                                              |  |  |  | 0,172                                        |  |  |  | 0,036                          |  |  |  | 0,003                                        |  |  |  | 0,002   |  |  |  | 0,024        |  |  |  | 0,025 |  |  |  | 0,0004 |  |  |  |       |  |  |  |
| No. 139280A                                       |  |                       |  | G 2008107 BUCURESTI                         |     |     |     |                                     |     |     |     | 43/000894                  |  |  |  | 380                                                |  |  |  | 532                                          |  |  |  | 30                             |  |  |  | 10,0                                         |  |  |  | 183,0   |  |  |  | 184,0        |  |  |  | 182,0 |  |  |  | 183,0  |  |  |  | - 20  |  |  |  |
|                                                   |  |                       |  |                                             |     |     |     |                                     |     |     |     |                            |  |  |  |                                                    |  |  |  |                                              |  |  |  |                                |  |  |  |                                              |  |  |  |         |  |  |  |              |  |  |  |       |  |  |  |        |  |  |  |       |  |  |  |
|                                                   |  |                       |  |                                             |     |     |     |                                     |     |     |     |                            |  |  |  |                                                    |  |  |  |                                              |  |  |  |                                |  |  |  |                                              |  |  |  |         |  |  |  |              |  |  |  |       |  |  |  |        |  |  |  |       |  |  |  |
|                                                   |  |                       |  |                                             |     |     |     |                                     |     |     |     |                            |  |  |  |                                                    |  |  |  |                                              |  |  |  |                                |  |  |  |                                              |  |  |  |         |  |  |  |              |  |  |  |       |  |  |  |        |  |  |  |       |  |  |  |

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.  
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined. Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(\*) Stabilimento produttore  
G = Giammoro (ME)  
P = Pallanzeno (VB)

Marchio del produttore



Quality Manager  
Daniele Lombardo



CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A06

CLIENTE / CUSTOMER:

DUFERCO TRAVI E PROFILATI S.p.A.

SOCIETÀ A SOCIO UNICO  
SEDE LEGALE ED AMMINISTRATIVA  
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)  
TEL 030216911 – FAX (Dir) 0302667598 (Amm) 0302169254  
PARTITA IVA IT 03386150175  
CODICE FISCALE 01711290062  
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062  
CAPITALE SOCIALE € 154.505.000,00 I.V.  
**STABILIMENTO DI GIAMMORO**  
98040 GIAMMORO (ME) ZONA INDUSTRIALE  
TEL. 0909386111 R.A. – FAX. 0909384229

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 003335 2023 **del** 9/06/23

Pag. 9

**Your Ref.:** 2008107 BUCURESTI / 4/05/23

THYSSENKRUPP MATERIALS ROMANIA SRL

BD.BASARABIA NR. 256, FORJA PRESE,

03035 BUCHAREST (RO)

012427

| DdT / SHIPPING DOCUMENT:                                                                                                                                     |   |                                                                     |   | ANALISI CHIMICHE / CHEMICAL COMPOSITION            |                                          |                                                    |                                                       |                                         |               |            |            |            |            |                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---------------------------------------------------------------------|---|----------------------------------------------------|------------------------------------------|----------------------------------------------------|-------------------------------------------------------|-----------------------------------------|---------------|------------|------------|------------|------------|-----------------|
| M/V ERLE<br><br>DDT/DELIVNOTE GB/3335                                                                                                                        |   |                                                                     |   | C71                                                | C72                                      | C73                                                | C74                                                   | C75                                     | C76           | C77        | C78        | C87        |            |                 |
|                                                                                                                                                              |   |                                                                     |   | C %                                                | Mn %                                     | Si %                                               | P %                                                   | S %                                     | Al %          | Cu %       | N %        | CEV        |            |                 |
|                                                                                                                                                              |   |                                                                     |   | C79                                                | C80                                      | C81                                                | C82                                                   | C83                                     | C84           | C85        | C86        |            |            |                 |
|                                                                                                                                                              |   |                                                                     |   | Cr %                                               | Ni %                                     | Mo %                                               | V %                                                   | Nb %                                    | Sn %          | Ti %       | B %        |            |            |                 |
| B01 Prodotto e Dimensioni / Product and Dimension<br>B11 B02 Qualità acciaio / Steel Grade<br>B08 N. Fasci / Number of Bundles<br>B10 Lunghezza / Lenght (m) |   |                                                                     |   | CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES |                                          |                                                    |                                                       |                                         |               |            |            |            |            |                 |
| Norma del prodotto / Standard product                                                                                                                        |   | Norma qualità / Standard quality<br>B08 N. Barre / Number of Pieces |   | B13                                                | C11 C12 C13 C40                          |                                                    |                                                       |                                         |               |            |            |            |            |                 |
|                                                                                                                                                              |   |                                                                     |   |                                                    | Prova di Resilienza - Impact Test KV (J) |                                                    |                                                       |                                         |               |            |            |            |            |                 |
| B07 Colata - Lotto / Heat - Item                                                                                                                             |   | A07 Ordine cliente N. / Customer's order N.                         |   | A08 Nostro ordine N. / Our Order N.                |                                          | C11<br>Snervamento<br>Yield point<br>ReH - N / mm² | C12<br>Resistenza<br>Tensile strenght<br>Rm - N / mm² | C13<br>Allungamento<br>Elongation<br>A% | C40<br>h (mm) | C42<br>KV1 | C42<br>KV2 | C42<br>KV3 | C43<br>KVm | C03<br>Temp. °C |
|                                                                                                                                                              |   | (*)                                                                 |   |                                                    |                                          |                                                    |                                                       |                                         |               |            |            |            |            |                 |
| HEA 450                                                                                                                                                      |   | S275J0 +AR                                                          | 1 | 12,10                                              | 0,14                                     | 0,53                                               | 0,20                                                  | 0,012                                   | 0,0050        | 0,007      | 0,354      | 0,010      | 0,309      |                 |
| EN 10365                                                                                                                                                     |   | EN10025-2/EN10034                                                   | 3 | 5.070                                              | 0,143                                    | 0,179                                              | 0,042                                                 | 0,001                                   |               | 0,025      |            |            |            |                 |
| No. 138937B                                                                                                                                                  | G | 2008107 BUCURESTI                                                   |   | 43/000894                                          | 317                                      | 467                                                | 33                                                    | 10,0                                    | 120,0         | 101,0      | 126,0      | 115,7      | 0          |                 |
| HEA 450                                                                                                                                                      |   | S275J0 +AR                                                          | 1 | 12,10                                              | 0,14                                     | 0,53                                               | 0,20                                                  | 0,012                                   | 0,0050        | 0,007      | 0,354      | 0,010      | 0,309      |                 |
| EN 10365                                                                                                                                                     |   | EN10025-2/EN10034                                                   | 3 | 5.070                                              | 0,143                                    | 0,179                                              | 0,042                                                 | 0,001                                   |               | 0,025      |            |            |            |                 |
| No. 138937B                                                                                                                                                  | G | 2008107 BUCURESTI                                                   |   | 43/000894                                          | 317                                      | 467                                                | 33                                                    | 10,0                                    | 120,0         | 101,0      | 126,0      | 115,7      | 0          |                 |
| HEA 340                                                                                                                                                      |   | S355J2 +AR                                                          | 1 | 12,10                                              | 0,16                                     | 1,31                                               | 0,21                                                  | 0,015                                   | 0,0030        | 0,025      | 0,354      | 0,009      | 0,439      |                 |
| EN 10365                                                                                                                                                     |   | EN 10025-2/EN10034                                                  | 4 | 5.070                                              | 0,085                                    | 0,160                                              | 0,032                                                 | 0,003                                   | 0,002         | 0,021      | 0,021      | 0,0004     |            |                 |
| No. 139893B                                                                                                                                                  | G | 2008107 BUCURESTI                                                   |   | 43/000894                                          | 366                                      | 531                                                | 33                                                    | 10,0                                    | 197,0         | 188,0      | 193,0      | 192,7      | - 20       |                 |
| HEA 340                                                                                                                                                      |   | S355J2 +AR                                                          | 1 | 12,10                                              | 0,16                                     | 1,31                                               | 0,21                                                  | 0,015                                   | 0,0030        | 0,025      | 0,354      | 0,009      | 0,439      |                 |
| EN 10365                                                                                                                                                     |   | EN 10025-2/EN10034                                                  | 4 | 5.070                                              | 0,085                                    | 0,160                                              | 0,032                                                 | 0,003                                   | 0,002         | 0,021      | 0,021      | 0,0004     |            |                 |
| No. 139893B                                                                                                                                                  | G | 2008107 BUCURESTI                                                   |   | 43/000894                                          | 366                                      | 531                                                | 33                                                    | 10,0                                    | 197,0         | 188,0      | 193,0      | 192,7      | - 20       |                 |
| HEA 340                                                                                                                                                      |   | S355J2 +AR                                                          | 1 | 12,10                                              | 0,16                                     | 1,31                                               | 0,21                                                  | 0,015                                   | 0,0030        | 0,025      | 0,354      | 0,009      | 0,439      |                 |
| EN 10365                                                                                                                                                     |   | EN 10025-2/EN10034                                                  | 4 | 5.070                                              | 0,085                                    | 0,160                                              | 0,032                                                 | 0,003                                   | 0,002         | 0,021      | 0,021      | 0,0004     |            |                 |
| No. 139893B                                                                                                                                                  | G | 2008107 BUCURESTI                                                   |   | 43/000894                                          | 366                                      | 531                                                | 33                                                    | 10,0                                    | 197,0         | 188,0      | 193,0      | 192,7      | - 20       |                 |
| HEA 340                                                                                                                                                      |   | S355J2 +AR                                                          | 1 | 12,10                                              | 0,15                                     | 1,34                                               | 0,21                                                  | 0,012                                   | 0,0030        | 0,024      | 0,351      | 0,010      | 0,441      |                 |
| EN 10365                                                                                                                                                     |   | EN 10025-2/EN10034                                                  | 4 | 5.070                                              | 0,084                                    | 0,177                                              | 0,034                                                 | 0,003                                   | 0,003         | 0,020      | 0,021      | 0,0004     |            |                 |
| No. 139894A                                                                                                                                                  | G | 2008107 BUCURESTI                                                   |   | 43/000894                                          | 372                                      | 535                                                | 32                                                    | 10,0                                    | 201,0         | 199,0      | 203,0      | 201,0      | - 20       |                 |
| HEA 450                                                                                                                                                      |   | S355J2 +AR                                                          | 1 | 12,10                                              | 0,15                                     | 1,22                                               | 0,19                                                  | 0,012                                   | 0,0040        | 0,021      | 0,369      | 0,011      | 0,422      |                 |
| EN 10365                                                                                                                                                     |   | EN 10025-2/EN10034                                                  | 3 | 4.999                                              | 0,112                                    | 0,161                                              | 0,032                                                 | 0,003                                   | 0,001         | 0,027      | 0,019      | 0,0002     |            |                 |
| No. 138949A                                                                                                                                                  | G | 2008107 BUCURESTI                                                   |   | 43/000894                                          | 358                                      | 510                                                | 32                                                    | 10,0                                    | 197,0         | 203,0      | 195,0      | 198,3      | - 20       |                 |
| HEA 450                                                                                                                                                      |   | S355J2 +AR                                                          | 1 | 12,10                                              | 0,15                                     | 1,22                                               | 0,19                                                  | 0,012                                   | 0,0040        | 0,021      | 0,369      | 0,011      | 0,422      |                 |
| EN 10365                                                                                                                                                     |   | EN 10025-2/EN10034                                                  | 3 | 4.999                                              | 0,112                                    | 0,161                                              | 0,032                                                 | 0,003                                   | 0,001         | 0,027      | 0,019      | 0,0002     |            |                 |
| No. 138949A                                                                                                                                                  | G | 2008107 BUCURESTI                                                   |   | 43/000894                                          | 358                                      | 510                                                | 32                                                    | 10,0                                    | 197,0         | 203,0      | 195,0      | 198,3      | - 20       |                 |
|                                                                                                                                                              |   |                                                                     |   |                                                    |                                          |                                                    |                                                       |                                         |               |            |            |            |            |                 |
|                                                                                                                                                              |   |                                                                     |   |                                                    |                                          |                                                    |                                                       |                                         |               |            |            |            |            |                 |
|                                                                                                                                                              |   |                                                                     |   |                                                    |                                          |                                                    |                                                       |                                         |               |            |            |            |            |                 |

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.  
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined.  
Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(\*) Stabilimento produttore  
G = Giammoro (ME)  
P = Pallanzeno (VB)

Marchio del produttore



Quality Manager  
Daniele Lombardo

*Daniele Lombardo*





CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A06

CLIENTE / CUSTOMER:

DUFERCO TRAVI E PROFILATI S.p.A.

SOCIETÀ A SOCIO UNICO  
SEDE LEGALE ED AMMINISTRATIVA  
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)  
TEL 030216911 – FAX (Dir) 0302667598 (Amm) 0302169254  
PARTITA IVA IT 03386150175  
CODICE FISCALE 01711290062  
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062  
CAPITALE SOCIALE € 154.505.000,00 I.V.  
**STABILIMENTO DI GIAMMORO**  
98040 GIAMMORO (ME) ZONA INDUSTRIALE  
TEL. 09093861111 R.A. – FAX. 0909384229

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 003335 2023 **del** 9/06/23

Pag. 10

**Your Ref.:** 2008107 BUCURESTI / 4/05/23

THYSSENKRUPP MATERIALS ROMANIA SRL

BD.BASARABIA NR. 256, FORJA PRESE,

03035 BUCHAREST (RO)

012427

| DdT / SHIPPING DOCUMENT:                          |   |                                             |    | ANALISI CHIMICHE / CHEMICAL COMPOSITION            |       |                                                 |                                                    |                                      |                                              |         |         |         |         |              |
|---------------------------------------------------|---|---------------------------------------------|----|----------------------------------------------------|-------|-------------------------------------------------|----------------------------------------------------|--------------------------------------|----------------------------------------------|---------|---------|---------|---------|--------------|
| M/V ERLE                                          |   | DDT/DELIVNOTE GB/3335                       |    | C71                                                | C72   | C73                                             | C74                                                | C75                                  | C76                                          | C77     | C78     | C87     |         |              |
|                                                   |   |                                             |    | C %                                                | Mn %  | Si %                                            | P %                                                | S %                                  | Al %                                         | Cu %    | N %     | CEV     |         |              |
|                                                   |   |                                             |    | C79                                                | C80   | C81                                             | C82                                                | C83                                  | C84                                          | C85     | C86     |         |         |              |
|                                                   |   |                                             |    | Cr %                                               | Ni %  | Mo %                                            | V %                                                | Nb %                                 | Sn %                                         | Ti %    | B %     |         |         |              |
| B01 Prodotto e Dimensioni / Product and Dimension |   |                                             |    | CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES |       |                                                 |                                                    |                                      |                                              |         |         |         |         |              |
| B11 Norma del prodotto / Standard product         |   | B10 Qualità acciaio / Steel Grade           |    | B08 N. Fasci / Number of Bundles                   |       | B10 Lunghezza / Lenght (m)                      |                                                    |                                      |                                              |         |         |         |         |              |
|                                                   |   |                                             |    | B08 N. Barre / Number of Pieces                    |       | B13 Quantità / Mass (Kg)                        |                                                    |                                      |                                              |         |         |         |         |              |
| B07 Colata - Lotto / Heat - Item                  |   | A07 Ordine cliente N. / Customer's order N. |    | A08 Nostro ordine N. / Our Order N.                |       | C11 Snervamento<br>Yield point<br>ReH - N / mm² | C12 Resistenza<br>Tensile strenght<br>Rm - N / mm² | C13 Allungamento<br>Elongation<br>A% | C40 Prova di Resilienza - Impact Test KV (J) |         |         |         |         |              |
|                                                   |   |                                             |    |                                                    |       |                                                 |                                                    |                                      | C41 h (mm)                                   | C42 KV1 | C42 KV2 | C42 KV3 | C43 KVm | C03 Temp. °C |
|                                                   |   | (*)                                         |    |                                                    |       |                                                 |                                                    |                                      |                                              |         |         |         |         |              |
| HEA 450                                           |   | S355J2 +AR                                  | 1  | 12,10                                              | 0,15  | 1,22                                            | 0,19                                               | 0,012                                | 0,0040                                       | 0,021   | 0,369   | 0,011   | 0,422   |              |
| EN 10365                                          |   | EN 10025-2/EN10034                          | 3  | 4.999                                              | 0,112 | 0,161                                           | 0,032                                              | 0,003                                | 0,001                                        | 0,027   | 0,019   | 0,0002  |         |              |
| No. 138949A                                       | G | 2008107 BUCURESTI                           |    | 43/000894                                          | 358   | 510                                             | 32                                                 | 10,0                                 | 197,0                                        | 203,0   | 195,0   | 198,3   | - 20    |              |
| IPE 330                                           |   | S355J2 +AR                                  | 1  | 12,10                                              | 0,14  | 1,24                                            | 0,17                                               | 0,016                                | 0,0040                                       | 0,024   | 0,488   | 0,011   | 0,428   |              |
| EN 10365                                          |   | EN 10025-2/EN10034                          | 4  | 2.338                                              | 0,134 | 0,152                                           | 0,027                                              | 0,003                                | 0,001                                        | 0,021   | 0,022   | 0,0004  |         |              |
| No. 135699B                                       | G | 2008107 BUCURESTI                           |    | 43/000894                                          | 378   | 533                                             | 34                                                 | 7,5                                  | 138,0                                        | 162,0   | 148,0   | 149,3   | - 20    |              |
| IPE 330                                           |   | S355J2 +AR                                  | 1  | 12,10                                              | 0,14  | 1,24                                            | 0,18                                               | 0,016                                | 0,0020                                       | 0,022   | 0,399   | 0,010   | 0,426   |              |
| EN 10365                                          |   | EN 10025-2/EN10034                          | 10 | 5.845                                              | 0,146 | 0,179                                           | 0,033                                              | 0,003                                | 0,001                                        | 0,020   | 0,018   | 0,0003  |         |              |
| No. 138673A                                       | G | 2008107 BUCURESTI                           |    | 43/000894                                          | 382   | 533                                             | 32                                                 | 7,5                                  | 134,0                                        | 142,0   | 139,0   | 138,3   | - 20    |              |
| IPE 500                                           |   | S355J2 +AR                                  | 1  | 12,10                                              | 0,14  | 1,24                                            | 0,18                                               | 0,015                                | 0,0060                                       | 0,025   | 0,401   | 0,010   | 0,423   |              |
| EN 10365                                          |   | EN 10025-2/EN10034                          | 4  | 4.320                                              | 0,098 | 0,185                                           | 0,037                                              | 0,004                                | 0,001                                        | 0,018   | 0,020   | 0,0003  |         |              |
| No. 139669B                                       | G | 2008107 BUCURESTI                           |    | 43/000894                                          | 378   | 516                                             | 31                                                 | 10,0                                 | 171,0                                        | 174,0   | 176,0   | 173,7   | - 20    |              |
| HEA 220                                           |   | S355J2 +AR                                  | 1  | 12,10                                              | 0,15  | 1,28                                            | 0,22                                               | 0,012                                | 0,0080                                       | 0,024   | 0,422   | 0,011   | 0,437   |              |
| EN 10365                                          |   | EN 10025-2/EN10034                          | 12 | 7.196                                              | 0,098 | 0,155                                           | 0,040                                              | 0,003                                | 0,003                                        | 0,026   | 0,018   | 0,0004  |         |              |
| No. 140077A                                       | G | 2008107 BUCURESTI                           |    | 43/000894                                          | 364   | 519                                             | 31                                                 | 7,5                                  | 152,0                                        | 151,0   | 155,0   | 152,7   | - 20    |              |
| IPE 400                                           |   | S355J2 +AR                                  | 1  | 12,10                                              | 0,15  | 1,25                                            | 0,21                                               | 0,014                                | 0,0020                                       | 0,022   | 0,377   | 0,011   | 0,430   |              |
| EN 10365                                          |   | EN 10025-2/EN10034                          | 5  | 3.936                                              | 0,120 | 0,167                                           | 0,036                                              | 0,003                                | 0,001                                        | 0,026   | 0,019   | 0,0002  |         |              |
| No. 138896A                                       | G | 2008107 BUCURESTI                           |    | 43/000894                                          | 385   | 529                                             | 30                                                 | 10,0                                 | 193,0                                        | 192,0   | 196,0   | 193,7   | - 20    |              |
| IPE 400                                           |   | S355J2 +AR                                  | 1  | 12,10                                              | 0,15  | 1,25                                            | 0,21                                               | 0,014                                | 0,0020                                       | 0,022   | 0,377   | 0,011   | 0,430   |              |
| EN 10365                                          |   | EN 10025-2/EN10034                          | 5  | 3.936                                              | 0,120 | 0,167                                           | 0,036                                              | 0,003                                | 0,001                                        | 0,026   | 0,019   | 0,0002  |         |              |
| No. 138896A                                       | G | 2008107 BUCURESTI                           |    | 43/000894                                          | 385   | 529                                             | 30                                                 | 10,0                                 | 193,0                                        | 192,0   | 196,0   | 193,7   | - 20    |              |
| IPE 400                                           |   | S355J2 +AR                                  | 1  | 12,10                                              | 0,15  | 1,24                                            | 0,19                                               | 0,013                                | 0,0020                                       | 0,023   | 0,401   | 0,010   | 0,426   |              |
| EN 10365                                          |   | EN 10025-2/EN10034                          | 5  | 3.936                                              | 0,108 | 0,165                                           | 0,032                                              | 0,004                                | 0,000                                        | 0,022   | 0,021   | 0,0003  |         |              |
| No. 139667A                                       | G | 2008107 BUCURESTI                           |    | 43/000894                                          | 382   | 524                                             | 31                                                 | 10,0                                 | 195,0                                        | 192,0   | 197,0   | 194,7   | - 20    |              |
|                                                   |   |                                             |    |                                                    |       |                                                 |                                                    |                                      |                                              |         |         |         |         |              |
|                                                   |   |                                             |    |                                                    |       |                                                 |                                                    |                                      |                                              |         |         |         |         |              |
|                                                   |   |                                             |    |                                                    |       |                                                 |                                                    |                                      |                                              |         |         |         |         |              |



CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A06

CLIENTE / CUSTOMER:

DUFERCO TRAVI E PROFILATI S.p.A.

SOCIETÀ A SOCIO UNICO  
SEDE LEGALE ED AMMINISTRATIVA  
VIA A. DIAZ N. 248 – 25010 SAN ZENO NAVIGLIO (BS)  
TEL 030216911 – FAX (Dir) 0302667598 (Amm) 0302169254  
PARTITA IVA IT 03386150175  
CODICE FISCALE 01711290062  
R.E.A. BS 368566 – REGISTRO IMPRESE (BS) N. 01711290062  
CAPITALE SOCIALE € 154.505.000,00 I.V.  
**STABILIMENTO DI GIAMMORO**  
98040 GIAMMORO (ME) ZONA INDUSTRIALE  
TEL. 0909386111 R.A. – FAX. 0909384229

A02 **Normativa** EN 10204 3.1

A03 **Numero:** 003335 2023 **del** 9/06/23

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**Your Ref.:** 2008107 BUCURESTI / 4/05/23

THYSSENKRUPP MATERIALS ROMANIA SRL

BD.BASARABIA NR. 256, FORJA PRESE,

03035 BUCHAREST (RO)

012427

| DdT / SHIPPING DOCUMENT:                          |   |                                             |   | ANALISI CHIMICHE / CHEMICAL COMPOSITION |       |                                       |       |                                          |        |                            |                                              |        |                                                    |     |     |     |          |
|---------------------------------------------------|---|---------------------------------------------|---|-----------------------------------------|-------|---------------------------------------|-------|------------------------------------------|--------|----------------------------|----------------------------------------------|--------|----------------------------------------------------|-----|-----|-----|----------|
| M/V ERLE                                          |   | DDT/DELIVNOTE GB/3335                       |   | C71                                     | C72   | C73                                   | C74   | C75                                      | C76    | C77                        | C78                                          | C87    |                                                    |     |     |     |          |
|                                                   |   |                                             |   | C %                                     | Mn %  | Si %                                  | P %   | S %                                      | Al %   | Cu %                       | N %                                          | CEV    |                                                    |     |     |     |          |
|                                                   |   |                                             |   | C79                                     | C80   | C81                                   | C82   | C83                                      | C84    | C85                        | C86                                          |        |                                                    |     |     |     |          |
|                                                   |   |                                             |   | Cr %                                    | Ni %  | Mo %                                  | V %   | Nb %                                     | Sn %   | Ti %                       | B %                                          |        |                                                    |     |     |     |          |
| B01 Prodotto e Dimensioni / Product and Dimension |   |                                             |   | B11 B02 Qualità acciaio / Steel Grade   |       |                                       |       | B08 N. Fasci / Number of Bundles         |        | B10 Lunghezza / Lenght (m) |                                              |        | CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES |     |     |     |          |
| Norma del prodotto / Standard product             |   | Norma qualità / Standard quality            |   | B08 N. Barre / Number of Pieces         |       | B13 Quantità / Mass (Kg)              |       | C11                                      | C12    | C13                        | C40 Prova di Resilienza - Impact Test KV (J) |        |                                                    |     |     |     |          |
| B07 Colata - Lotto / Heat - Item                  |   | A07 Ordine cliente N. / Customer's order N. |   | A08 Nostro ordine N. / Our Order N.     |       | Snervamento Yield point ReH - N / mm² |       | Resistenza Tensile strength Rm - N / mm² |        | Allungamento Elongation A% |                                              | C41    | C42                                                | C42 | C42 | C43 | C03      |
|                                                   |   |                                             |   |                                         |       |                                       |       |                                          |        |                            |                                              | h (mm) | KV1                                                | KV2 | KV3 | KVm | Temp. °C |
|                                                   |   | (*)                                         |   |                                         |       |                                       |       |                                          |        |                            |                                              |        |                                                    |     |     |     |          |
| IPE 400                                           |   | S355J2 +AR                                  | 1 | 12,10                                   | 0,15  | 1,24                                  | 0,19  | 0,013                                    | 0,0020 | 0,023                      | 0,401                                        | 0,010  | 0,426                                              |     |     |     |          |
| EN 10365                                          |   | EN 10025-2/EN10034                          | 5 | 3.936                                   | 0,108 | 0,165                                 | 0,032 | 0,004                                    | 0,000  | 0,022                      | 0,021                                        | 0,0003 |                                                    |     |     |     |          |
| No. 139667A                                       | G | 2008107 BUCURESTI                           |   | 43/000894                               | 382   | 524                                   | 31    | 10,0                                     | 195,0  | 192,0                      | 197,0                                        | 194,7  | - 20                                               |     |     |     |          |
| IPE 400                                           |   | S355J2 +AR                                  | 1 | 12,10                                   | 0,15  | 1,24                                  | 0,19  | 0,013                                    | 0,0020 | 0,023                      | 0,401                                        | 0,010  | 0,426                                              |     |     |     |          |
| EN 10365                                          |   | EN 10025-2/EN10034                          | 5 | 3.897                                   | 0,108 | 0,165                                 | 0,032 | 0,004                                    | 0,000  | 0,022                      | 0,021                                        | 0,0003 |                                                    |     |     |     |          |
| No. 139667A                                       | G | 2008107 BUCURESTI                           |   | 43/000894                               | 382   | 524                                   | 31    | 10,0                                     | 195,0  | 192,0                      | 197,0                                        | 194,7  | - 20                                               |     |     |     |          |
| IPE 400                                           |   | S355J2 +AR                                  | 1 | 12,10                                   | 0,15  | 1,24                                  | 0,19  | 0,013                                    | 0,0020 | 0,023                      | 0,401                                        | 0,010  | 0,426                                              |     |     |     |          |
| EN 10365                                          |   | EN 10025-2/EN10034                          | 5 | 3.897                                   | 0,108 | 0,165                                 | 0,032 | 0,004                                    | 0,000  | 0,022                      | 0,021                                        | 0,0003 |                                                    |     |     |     |          |
| No. 139667A                                       | G | 2008107 BUCURESTI                           |   | 43/000894                               | 382   | 524                                   | 31    | 10,0                                     | 195,0  | 192,0                      | 197,0                                        | 194,7  | - 20                                               |     |     |     |          |
| IPE 400                                           |   | S355J2 +AR                                  | 1 | 12,10                                   | 0,15  | 1,24                                  | 0,19  | 0,013                                    | 0,0020 | 0,023                      | 0,401                                        | 0,010  | 0,426                                              |     |     |     |          |
| EN 10365                                          |   | EN 10025-2/EN10034                          | 5 | 3.897                                   | 0,108 | 0,165                                 | 0,032 | 0,004                                    | 0,000  | 0,022                      | 0,021                                        | 0,0003 |                                                    |     |     |     |          |
| No. 139667A                                       | G | 2008107 BUCURESTI                           |   | 43/000894                               | 382   | 524                                   | 31    | 10,0                                     | 195,0  | 192,0                      | 197,0                                        | 194,7  | - 20                                               |     |     |     |          |
| IPE 400                                           |   | S355J2 +AR                                  | 1 | 12,10                                   | 0,15  | 1,24                                  | 0,19  | 0,013                                    | 0,0020 | 0,023                      | 0,401                                        | 0,010  | 0,426                                              |     |     |     |          |
| EN 10365                                          |   | EN 10025-2/EN10034                          | 5 | 3.897                                   | 0,108 | 0,165                                 | 0,032 | 0,004                                    | 0,000  | 0,022                      | 0,021                                        | 0,0003 |                                                    |     |     |     |          |
| No. 139667A                                       | G | 2008107 BUCURESTI                           |   | 43/000894                               | 382   | 524                                   | 31    | 10,0                                     | 195,0  | 192,0                      | 197,0                                        | 194,7  | - 20                                               |     |     |     |          |
| IPE 400                                           |   | S355J2 +AR                                  | 1 | 12,10                                   | 0,15  | 1,24                                  | 0,19  | 0,013                                    | 0,0020 | 0,023                      | 0,401                                        | 0,010  | 0,426                                              |     |     |     |          |
| EN 10365                                          |   | EN 10025-2/EN10034                          | 5 | 3.898                                   | 0,108 | 0,165                                 | 0,032 | 0,004                                    | 0,000  | 0,022                      | 0,021                                        | 0,0003 |                                                    |     |     |     |          |
| No. 139667A                                       | G | 2008107 BUCURESTI                           |   | 43/000894                               | 382   | 524                                   | 31    | 10,0                                     | 195,0  | 192,0                      | 197,0                                        | 194,7  | - 20                                               |     |     |     |          |
|                                                   |   |                                             |   |                                         |       |                                       |       |                                          |        |                            |                                              |        |                                                    |     |     |     |          |
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|                                                   |   |                                             |   |                                         |       |                                       |       |                                          |        |                            |                                              |        |                                                    |     |     |     |          |

RADIOACTIVITY FREE (0,1 Bq/g)

Impiego previsto: Edilizia Civile. - Durabilità: Nessuna prescrizione determinata. Sostanza regolamentata: Nessuna prescrizione specifica determinata. Saldabilità: Secondo EN 1011-2. Si dichiara che i risultati delle prove sono conformi all'ordine.  
Intended use of: civil construction. Durability: no specified requirement. Substance regulated: No specific prescription determined.  
Weldability: according to EN 1011-2. We declared that the test results are in accordance with the order.

01

(\*) Stabilimento produttore  
G = Giammoro (ME)  
P = Pallanzeno (VB)

Marchio del produttore



Quality Manager  
Daniele Lombardo



CERTIFICATO DI CONTROLLO/INSPECTION CERTIFICATE

A06 CLIENTE / CUSTOMER:

A02 Normativa EN 10204 3.1  
A03 Numero: 003335 2023 del 9/06/23  
Pag. 12  
Your Ref.: 2008107 BUCURESTI / 4/05/23

THYSSENKRUPP MATERIALS ROMANIA SRL  
BD.BASARABIA NR. 256, FORJA PRESE,  
03035 BUCHAREST (RO)

012427

| DdT / SHIPPING DOCUMENT:                          |  |                                             |  | ANALISI CHIMICHE / CHEMICAL COMPOSITION            |                                              |                                |                                              |         |         |         |         |              |  |
|---------------------------------------------------|--|---------------------------------------------|--|----------------------------------------------------|----------------------------------------------|--------------------------------|----------------------------------------------|---------|---------|---------|---------|--------------|--|
| M/V ERLE                                          |  | DDT/DELIVNOTE GB/3335                       |  | C71                                                | C72                                          | C73                            | C74                                          | C75     | C76     | C77     | C78     | C87          |  |
|                                                   |  |                                             |  | C79                                                | C80                                          | C81                            | C82                                          | C83     | C84     | C85     | C86     |              |  |
|                                                   |  |                                             |  | C %                                                | Mn %                                         | Si %                           | P %                                          | S %     | Al %    | Cu %    | N %     | CEV          |  |
|                                                   |  |                                             |  | Cr %                                               | Ni %                                         | Mo %                           | V %                                          | Nb %    | Sn %    | Ti %    | B %     |              |  |
| B01 Prodotto e Dimensioni / Product and Dimension |  |                                             |  | CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES |                                              |                                |                                              |         |         |         |         |              |  |
| B11 Norma del prodotto / Standard product         |  | B10 Qualità acciaio / Steel Grade           |  |                                                    |                                              |                                |                                              |         |         |         |         |              |  |
|                                                   |  | B08 N. Fasci / Number of Bundles            |  |                                                    |                                              |                                |                                              |         |         |         |         |              |  |
| B07 Colata - Lotto / Heat - Item                  |  | A07 Ordine cliente N. / Customer's order N. |  |                                                    |                                              |                                |                                              |         |         |         |         |              |  |
|                                                   |  | B13 Quantità / Mass (Kg)                    |  |                                                    |                                              |                                |                                              |         |         |         |         |              |  |
|                                                   |  | A08 Nostro ordine N. / Our Order N.         |  |                                                    |                                              |                                |                                              |         |         |         |         |              |  |
|                                                   |  |                                             |  | C11 Snervamento Yield point ReH - N / mm²          | C12 Resistenza Tensile strength Rm - N / mm² | C13 Allungamento Elongation A% | C40 Prova di Resilienza - Impact Test KV (J) |         |         |         |         |              |  |
|                                                   |  |                                             |  |                                                    |                                              |                                | C41 h (mm)                                   | C42 KV1 | C42 KV2 | C42 KV3 | C43 KVm | C03 Temp. °C |  |
|                                                   |  |                                             |  |                                                    |                                              |                                |                                              |         |         |         |         |              |  |
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## DICHIARAZIONE DI PRESTAZIONE DECLARATIE DE PERFORMANTA

**02      2023      N°      DDT /      GB/3335**

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004  
 Tipo: S275      qualità: JR, J0, J2.

*Marca otel, clasa de calitate: produs laminat la cald in conformitate cu EN10025-2:2004.*

*Marca otel: S275      clasa de calitate: JR,J0,J2.*

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.

*Destinat produselor utilizate in constructii: produse laminate la cald din otel pentru constructii.*

3. Nome e indirizzo del fabbricante:  
*Numele si adresa producatorului:*

Duferco Travi e Profilati S.p.a., stabilimento di Giammoro

Zona Industriale Giammoro  
 98042 Pace del Mela (ME), Italia  
 Tel. +39090938611- fax +390909385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:  
*Sistem de evaluare si verificare a constantei performantei produsului de constructii.:*

2+

- 6a. Norma armonizzata: EN 10025-1:2004.  
*Standard armonizat: EN 10025-1:2004.*

Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:

*Organismul notificat care a emis certificatul de conformitate pentru controlul productiei in fabrica:*

N° 1608 IGQ

## 7. Prestazione dichiarata / Declaratie de performanta

| Caratteristiche essenziali<br><i>caracteristici esentiale</i>                     | Prestazione<br><i>Performanta</i>                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  | Norma armonizzata<br><i>Standard armonizat</i> |
|-----------------------------------------------------------------------------------|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------|
| Tolleranze dimensionali e di forma /<br><i>tolerante dimensionale si de forma</i> | EN10034 : 1993                                   | - Travi / Profile HEA/B/M: 80 ÷ 500.<br>- Travi / Profile I: IPE80 ÷ IPE550.<br>- Travi / Profile IPN: 80 ÷ 400.<br>- Travi ad U ed UPN / Profile U si UPN: 30 ÷ 120 mm.<br>- Angolari ad ali uguali e disuguali / Corniere cu aripi egale si inegale: larghezza / latime mm. 30 ÷ 80, spessore sino a / grosime până la 12 mm.<br>- Larghi piatti / Bare late larghezza / late 30 ÷ 550 mm, spessore / grosime 5 ÷ 40 mm.<br>- Profilati secondo BS con spessori di ala sino a / Grinzi si coloane BS cu grosimea talpii pana la 12 mm.<br>- Quadri in barre / Bare patrute : 10 ÷ 50 mm.<br>- Tondi in barre / Bare rotunde: 12 ÷ 50 mm. |  |                                                |
|                                                                                   | EN10034 : 1993                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                                                |
|                                                                                   | EN10024 : 1995                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                                                |
|                                                                                   | EN10279 : 2000                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                                                |
|                                                                                   | EN10056-2 : 1993                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                                                |
|                                                                                   | EU91 : 1981 /<br>DIN59200 : 2001                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                                                |
| Carico di Snervamento /<br><i>Limita de curgere (MPa)</i>                         | BS4-1 : 2005                                     | Spessore nominale / Grosimea nominala (mm)<br>≤ 16      > 16 ÷ ≤ 40      > 40 ÷ ≤ 63<br>S275JR/J0/J2      > 275      > 265      > 255                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                                |
|                                                                                   | EN 10059: 2003<br>EN 10060: 2003                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                                                |
| Carico di rottura /<br><i>Rezistenta la rupere (MPa)</i>                          | Tipo / qualità<br>Marca otel / clasa de calitate | Spessore nominale / Grosimea nominala (mm)<br>≥ 3 ÷ ≤ 100<br>S275JR/J0/J2      410 ÷ 560                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                                                |
|                                                                                   | Tipo / qualità<br>Marca otel / clasa de calitate |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                                                |
| Allungamento /<br><i>Alungirea %</i>                                              | Tipo / qualità<br>Marca otel / clasa de calitate | Spessore nominale / Grosimea nominala (mm)<br>≥ 3 ÷ ≤ 40      > 40 ÷ ≤ 63<br>S275JR/J0      ≥ 23      ≥ 22<br>S275J2      ≥ 21      ≥ 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                                                |
|                                                                                   | Tipo / qualità<br>Marca otel / clasa de calitate |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                                                |
|                                                                                   | Tipo / qualità<br>Marca otel / clasa de calitate |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                                                |
| Resilienza / Energia de<br>rupere la soc (rezilienta)<br>(J)                      | Tipo / qualità<br>Marca otel / clasa de calitate | Spessore nominale / Grosimea nominala (mm)<br>≤ 150<br>Temperatura / Temperature (°C)      KV min<br>S275JR      20      27<br>S275J0      0      27<br>S275J2      - 20      27                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                                |
|                                                                                   | Tipo / qualità<br>Marca otel / clasa de calitate |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                                                |
|                                                                                   | Tipo / qualità<br>Marca otel / clasa de calitate |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                                                |
|                                                                                   | Tipo / qualità<br>Marca otel / clasa de calitate |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                                                |
| Saldabilità / Sudabilitatea<br>(CEV% max)                                         | Tipo / qualità<br>Marca otel / clasa de calitate | Spessore nominale / Grosimea nominala (mm)<br>≤ 30      > 30 ÷ ≤ 40      > 40 ÷ ≤ 150<br>S275JR/J0/J2      0,41      0,43                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                                |
|                                                                                   | Tipo / qualità<br>Marca otel / clasa de calitate |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                                                |
| Durabilità / Durabilitatea                                                        | S275JR/J0/J2                                     | NPD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |                                                |

EN 10025-2:2004

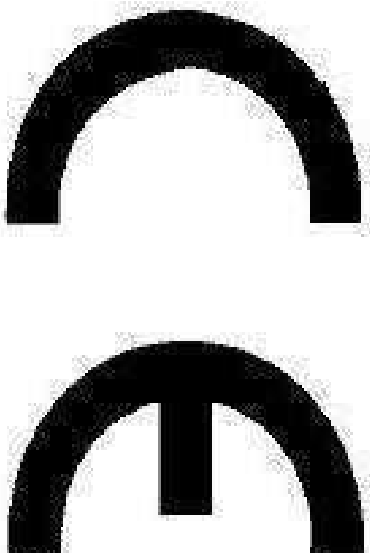
La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.  
 Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.  
*Performanta produsului este in conformitate cu performanta declarata in prezentul document.*  
*Prezenta declaratie de performanta este emisa sub responsabilitatea exclusiva a producatorului.*

Firmato a nome e per conto del fabbricante / *Semnat pentru si in numele producatorului:*

Giuliano Bo , direttore di stabilimento / *Directorul fabricii*

Pace del Mela,      19/01/21

**02      N°      2023      DDT /      GB/3335**



1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME)  
Italia

07

1608 CPD P089

EN10025-1:2004

**S275J0 +AR**

Destinati ad essere utilizzati su prodotti per impieghi strutturali.

*Destinate a fi utilizate pe produsele din otel pentru constructii.*

Tolerance / *Tolerante*

Carico di snervamento / *Limita de curgere*

Carico di rottura / *Rezistenta la rupere*

Allungamento / *Alungirea*

Resilienza / *Rezilienta*

Saldabilità / *Sudabilitatea*

Durabilità / *Durabilitatea* :

Espressamente indicati nella DoP

Indicate in mod expres in DoP

NPD

## DICHIARAZIONE DI PRESTAZIONE DECLARATIE DE PERFORMANTA

**03      2023      N°      DDT /      GB/3335**

1. Tipo, qualità: laminati a caldo in accordo con EN 10025-2:2004  
 Tipo: S355      qualità: JR, J0, J2, K2.

Marca otel, clasa de calitate: produs laminat la cald in conformitate cu EN10025-2:2004.

Marca otel: S355      clasa de calitate: JR,J0,J2,K2.

2. Uso previsto del prodotto da costruzione: prodotti laminati a caldo di acciai per impieghi strutturali.

Destinat produselor utilizate in constructii: produse laminate la cald din otel pentru constructii.

3. Nome e indirizzo del fabbricante:

Numele si adresa producatorului:

Duferco Travi e Profilati S.p.a, stabilimento di Giammoro

Zona Industriale Giammoro

98C N°      DDT / ), Italia

Tel. 0972 707070 - fax 0972 390909 385368

4. N.A.

5. Sistema di valutazione e verifica della costanza delle prestazioni del prodotto da costruzione:  
 Sistem de evaluare si verificare a constantei performantei produsului de constructii.:

2+

- 6a. Norma armonizzata: EN 10025-1:2004.

Standard armonizat: EN 10025-1:2004.

Organismo Notificato che ha rilasciato il certificato di conformità del controllo di produzione in fabbrica:

Organismul notificat care a emis certificatul de conformitate pentru controlul productiei in fabrica:

N° 1608 IGQ

## 7. Prestazione dichiarata / Declaratie de performanta

| Caratteristiche essenziali<br>caracteristici esentiale                  | Prestazione<br>Performanta                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             | Norma armonizzata<br>Standard armonizat |
|-------------------------------------------------------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------------------------------|
| Tolleranze dimensionali e di forma / tolerante dimensionale si de forma | EN10034 : 1993                                  | <div>- Travi / Profile HEA/B/M: 80 ÷ 500.</div> <div>- Travi / Profile I: IPE80 ÷ IPE550.</div> <div>- Travi / Profile IPN: 80 ÷ 400.</div> <div>- Travi ad U ed UPN / Profile U si UPN: 30 ÷ 120 mm.</div> <div>- Angolari ad ali uguali e disuguali / Corniere cu aripi egale si inegale: larghezza / latime mm. 30 ÷ 80, spessore sino a / grosime până la 12 mm.</div> <div>- Larghi piatti / Bare late larghezza / late 30 ÷ 550 mm, spessore / grosime 5 ÷ 40 mm.</div> <div>- Profilati secondo BS con spessori di ala sino a / Grinzi si coloane BS cu grosimea talpii pana la 12 mm.</div> <div>- Quadri in barre / Bare pătrate : 10 ÷ 50 mm.</div> <div>- Tondi in barre / Bare rotunde: 12 ÷ 50 mm.</div> |             |                                         |
|                                                                         | EN10034 : 1993                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |                                         |
|                                                                         | EN10024 : 1995                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |                                         |
|                                                                         | EN10279 : 2000                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |                                         |
|                                                                         | EN10056-2 : 1993                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |                                         |
|                                                                         | EU91 : 1981 / DIN59200 : 2001                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |                                         |
| BS4-1 : 2005                                                            |                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |                                         |
| EN 10059: 2003                                                          |                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |                                         |
| EN 10060: 2003                                                          |                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |                                         |
| Carico di Snervamento / Limita de curgere (MPa)                         | Tipo / qualità<br>Marca otel /clasa de calitate | Spessore nominale / Grosimea nominala (mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |                                         |
|                                                                         | S355JR/J0/J2/K2                                 | ≤ 16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | > 16 ÷ ≤ 40 | > 40 ÷ ≤ 63                             |
| Carico di rottura / Rezistenta la rupere (MPa)                          | Tipo / qualità<br>Marca otel /clasa de calitate | Spessore nominale / Grosimea nominala (mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |                                         |
|                                                                         | S355JR/J0/J2/K2                                 | ≥ 355                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ≥ 345       | ≥ 335                                   |
| Allungamento / Alungirea %                                              | Tipo / qualità<br>Marca otel /clasa de calitate | Spessore nominale / Grosimea nominala (mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |                                         |
|                                                                         | S355JR/J0/J2                                    | ≥ 3 ÷ ≤ 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |                                         |
| Resilienza / Energia de rupere la soc (rezilienta) (J)                  | Tipo / qualità<br>Marca otel /clasa de calitate | Spessore nominale / Grosimea nominala (mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |                                         |
|                                                                         | S355JR/J0/J2                                    | ≥ 3 ÷ ≤ 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | > 40 ÷ ≤ 63 |                                         |
|                                                                         | S355K2                                          | ≥ 22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ≥ 21        |                                         |
| Saldabilità / Sudabilitatea (CEV% max)                                  | Tipo / qualità<br>Marca otel /clasa de calitate | Spessore nominale / Grosimea nominala (mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |                                         |
|                                                                         | S355JR                                          | ≤ 150                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |                                         |
|                                                                         | S355J0                                          | Temperatura / Temperature (°C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                         |
|                                                                         | S355J2                                          | KV min                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                                         |
|                                                                         | S355K2                                          | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 27          |                                         |
| Durabilità / Durabilitatea                                              | Tipo / qualità<br>Marca otel /clasa de calitate | Spessore nominale / Grosimea nominala (mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |                                         |
|                                                                         | S355JR/J0/J2/K2                                 | ≤ 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | > 30 ÷ ≤ 40 | > 40 ÷ ≤ 150                            |
| Durabilità / Durabilitatea                                              | Tipo / qualità<br>Marca otel /clasa de calitate | Spessore nominale / Grosimea nominala (mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |                                         |
|                                                                         | S355JR/J0/J2/K2                                 | 0,46                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0,48        |                                         |
| Durabilità / Durabilitatea                                              | Tipo / qualità<br>Marca otel /clasa de calitate | Spessore nominale / Grosimea nominala (mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |                                         |
|                                                                         | S355JR/J0/J2/K2                                 | NPD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                                         |

EN 10025-2:2004

EN 10025-2:2004

La prestazione del prodotto è conforme alla prestazione dichiarata nel presente documento.  
 Si rilascia la presente dichiarazione di prestazione sotto la responsabilità esclusiva del fabbricante.  
 Performanta produsului este in conformitate cu performanta declarata in prezentul document.  
 Prezentă declaratie de performanta este emisa sub responsabilitatea exclusiva a producatorului.

Firmato a nome e per conto del fabbricante / Semnat pentru si in numele producatorului:

Giuliano Bo, direttore di stabilimento / Directorul fabricii

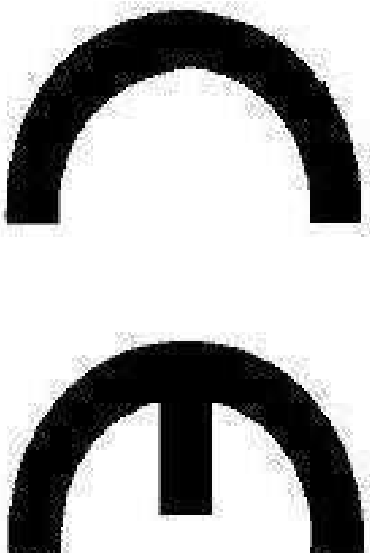


Pace del Mela, 19/01/21

**03      N°      2023      DDT /**

**GB/3335**





1608

DUFERCO TRAVI E PROFILATI S.p.A., Zona Industriale Giammoro, 98042 Pace del Mela (ME)  
Italia

07

1608 CPD P089

EN10025-1:2004

**S355J2 +AR**

Destinati ad essere utilizzati su prodotti per impieghi strutturali.

*Destinate a fi utilizate pe produsele din otel pentru constructii.*

Tolerance / *Tolerante*

Carico di snervamento / *Limita de curgere*

Carico di rottura / *Rezistenta la rupere* :

Allungamento / *Alungirea*

Resilenza / *Rezilienta*

Saldabilità / *Sudabilitatea*

Espressamente indicati nella DoP

Indicate in mod expres in DoP

Durabilità / *Durabilitatea* :

NPD



**INSTYTUT TECHNIKI BUDOWLANEJ**

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(+48 22) 825-76-55

fax: (+48 22) 825-52-86

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Member of



[www.eota.eu](http://www.eota.eu)

## European Technical Assessment

**ETA-15/0578  
of 30/09/2015**

### General part

**Technical Assessment Body issuing the European Technical Assessment**

Instytut Techniki Budowlanej

**Trade name of the construction product**

Wkręt-Met Flat Roof Fasteners

**Product family to which the construction product belongs**

Fasteners for flexible roof waterproofing systems

**Manufacturer**

Klimas Sp. z o.o.  
ul. Wincentego Witosa 135/137  
Kuźnica Kiedrzyńska  
42-233 Mykanów  
Poland

**Manufacturing plant**

Klimas Sp. z o.o.  
ul. Wincentego Witosa 135/137  
Kuźnica Kiedrzyńska  
42-233 Mykanów  
Poland

**This European Technical Assessment contains**

32 pages including 28 Annexes which form an integral part of this Assessment

**This European Technical Assessment is issued in accordance with regulation (EU) No 305/2011, on the basis of**

Guideline for European Technical Approval ETAG 006, edition March 2000, amended November 2012, "Systems of mechanically fastened flexible roof waterproofing membranes", used as European Assessment Document (EAD)

*This European Technical Assessment is issued by the Technical Assessment Body in its official language. Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and shall be identified as such.*

*Communication of this European Technical Assessment, including transmission by electronic means, shall be in full. However, partial reproduction may only be made with the written consent of the issuing Technical Assessment Body. Any partial reproduction has to be identified as such.*



## Specific part

### 1. Technical description of the product

The construction products are mechanical fasteners Wkręt-Met Flat Roof Fasteners. The fasteners comprise a screw made of carbon steel protected by ceramic coating and a washer or washer with integral sleeve. Washer is made of stainless steel. Washer with integrated sleeve is made of plastic material: polypropylene (PP), polyethylene (PE) or polyamide (PA).

The fasteners shall correspond to the drawings and information given in Annexes 1 to 28.

### 2. Specification of the intended use in accordance with the applicable European Assessment Document (EAD)

The fasteners Wkręt-Met Flat Roof Fasteners are intended to be used for the fastening of flexible roof waterproofing membranes according to ETAG 006. The possible substructures are steel sheets, concrete, precast concrete slab, plywood and timber boards including OSB.

The provisions made in this European Technical Assessment are based on an assumed working life of the fasteners of 10 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer or Technical Assessment Body, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

### 3. Performances of the product and references to the methods used for their assessment

#### 3.1. Performance of the product

##### 3.1.1. Safety in case of fire (BWR 2)

Reaction to fire: No performance assessed.

##### 3.1.2. Hygiene, health and the environment (BWR 3)

Regarding the dangerous substances clauses contained in this European Technical Assessment, there may be requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

##### 3.1.3. Safety in use (BWR 4)

The characteristic values and mean values of the axial load resistance of the fasteners are given in Annex 26 to 28. The values were determined by axial loading tests according to ETAG 006.

The fasteners are deemed to satisfy the requirements of ETAG 006 concerning unwinding. This was evaluated on the basis of existing field experience of the manufacturer.

##### 3.1.4. Sustainable use of natural resources (BWR 7)

No performance assessed.

### **3.1.5. General aspects relating to fitness for use**

The durability requirements of ETAG 006 (resistance to corrosion of metallic parts, impact resistance and brittleness of plastic parts before and after heat ageing, requirements for results of Charpy tests for plastic parts before and after heat ageing) are satisfied for the coated carbon steel and the polypropylene, polyethylene or polyamide parts of the fasteners.

All parts made of carbon steel protected by ceramic coating resisted to 15 cycles of the test procedure described in ETAG 006 (Kaesternich test) and did not show more than 15% surface corrosion.

The test results of the impact resistance and brittleness of plastic parts showed a drop height more than 1,0 m before and after heat ageing of these parts. Furthermore the results of the corresponding Charpy tests after heat ageing did not show any significant decline compared to the results before heat ageing.

### **3.2. Methods used for the assessment**

The assessment of fitness of the fasteners for the declared intended use has been made in accordance with ETAG 006.

### **4. Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base**

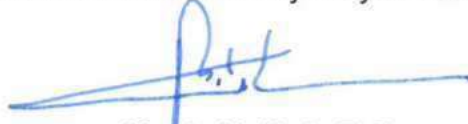
According to Decision 98/143/EC of the European Commission the system 2+ of assessment and verification of constancy of performance applies (see Annex V to Regulation (EU) No 305/2011).

### **5. Technical details necessary for the implementation of the AVCP system, as provided for in the applicable European Assessment Document (EAD)**

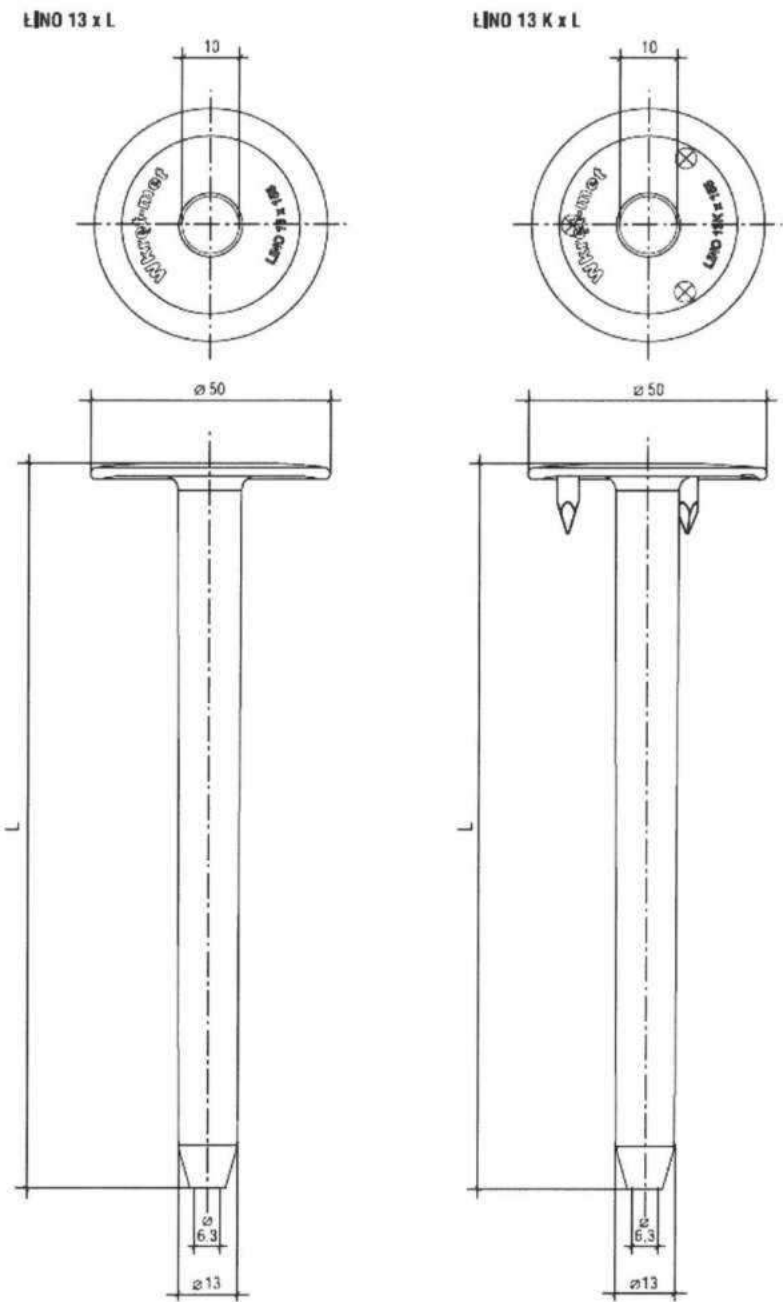
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at the Instytut Techniki Budowlanej.

For type testing the results of the tests performed as part of the assessment for the European Technical Assessment shall be used unless there are changes in the production line or plant. In such cases the necessary type testing has to be agreed between Instytut Techniki Budowlanej and the notified body.

Issued in Warsaw on 30/09/2015 by Instytut Techniki Budowlanej



Marcin M. Kruk, PhD  
Director of ITB



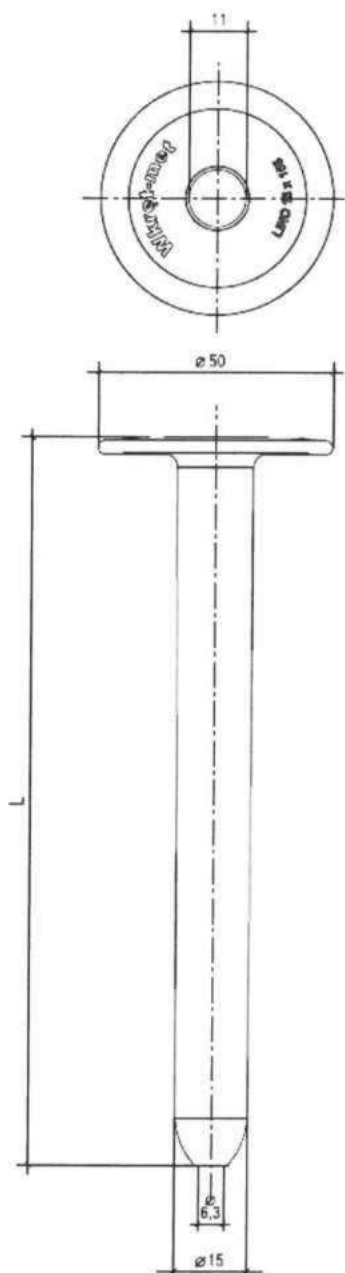
**Wkręt-Met Flat Roof Fasteners**

Plastic sleeves: LINO 13 and LINO 13 K

**Annex 1**  
of European  
Technical Assessment  
ETA-15/0578



LINO 15 x L



**Wkręt-Met Flat Roof Fasteners**

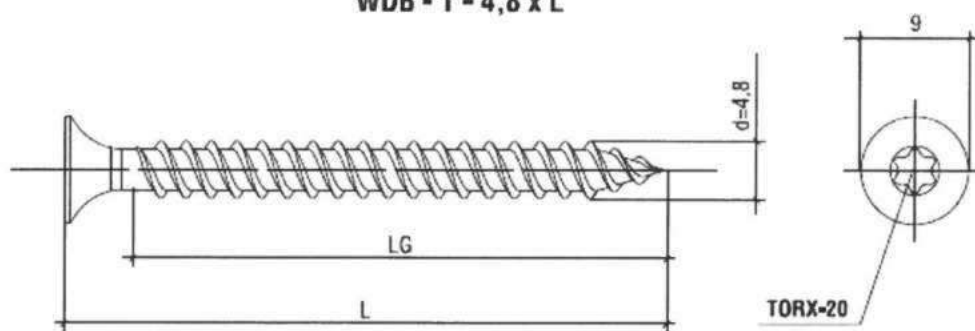
Plastic sleeves: LINO 15

**Annex 2**

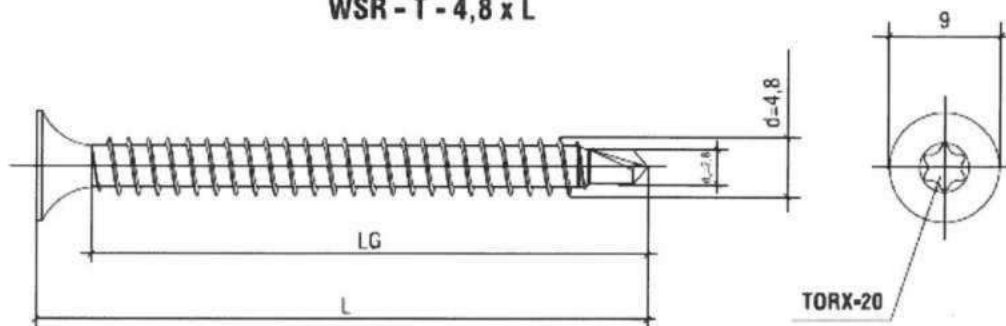
of European  
Technical Assessment  
ETA-15/0578



**WDB - T - 4,8 x L**



**WSR - T - 4,8 x L**



**Wkręt-Met Flat Roof Fasteners**

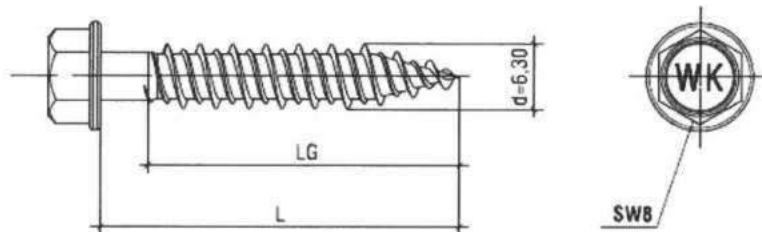
Self-tapping screw WDB-T-4,8xL  
Self-drilling screw WSR-T-4,8xL

**Annex 4**

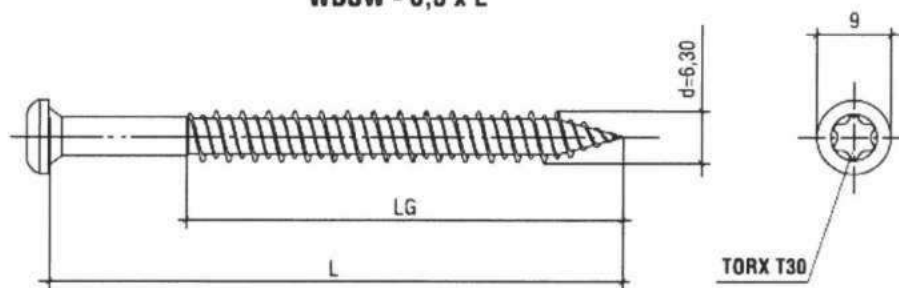
of European  
Technical Assessment  
ETA-15/0578



**WB6 - C - 6,3 × L**



**WBSW - 6,3 × L**

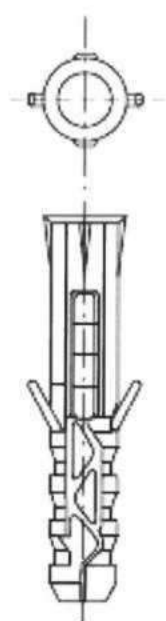


**Wkręt-Met Flat Roof Fasteners**

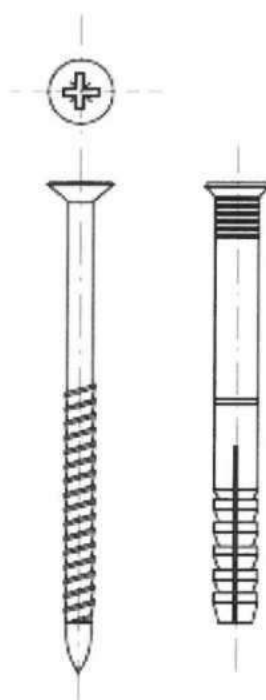
Self-tapping screw WB6-C-6,3×L  
Self-tapping screw WBSW-6,3×L

**Annex 5**

of European  
Technical Assessment  
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**KNX 8 x 50**



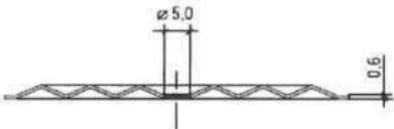
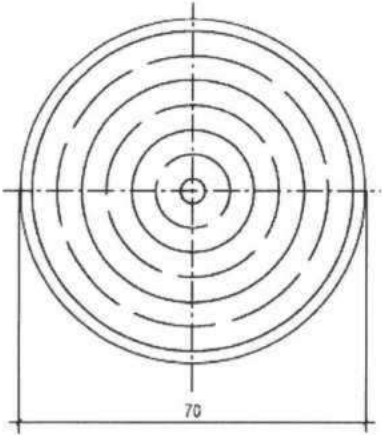
**SMN 6 x 50  
SMN 8 x 60**

**Wkręt-Met Flat Roof Fasteners**

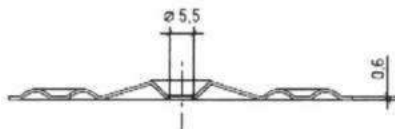
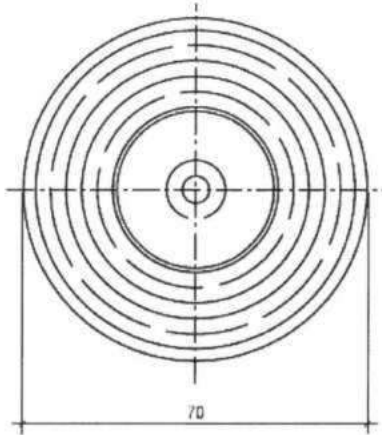
KNX 8 x 50  
SMN 6 x 50 and SMN 8 x 60

**Annex 6**

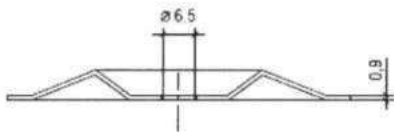
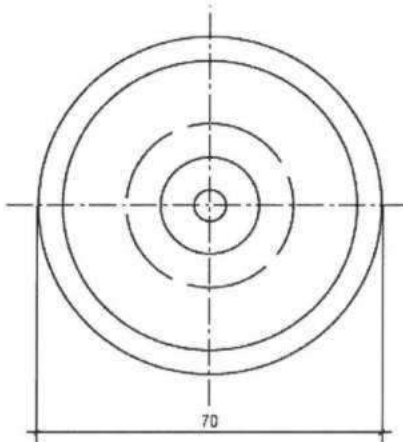
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Technical Assessment  
ETA-15/0578



**KD-01**



**KD-02-W-5,5**



**KD-07-WW**

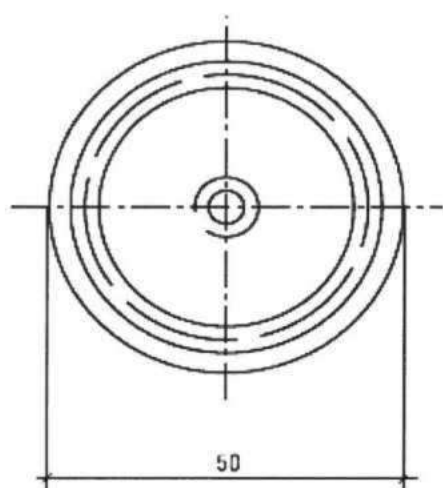
**Wkręt-Met Flat Roof Fasteners**

Stainless steel washer pads:  
KD-01, KD-02-W-5,5 and KD-07-WW

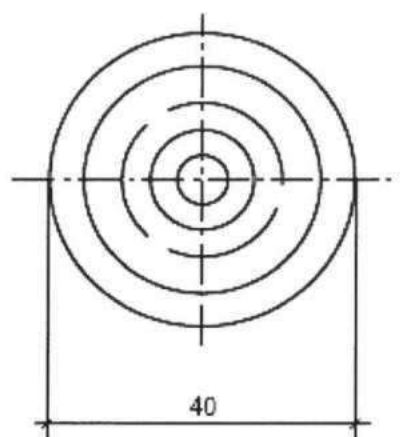
**Annex 7**

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**KD-05**



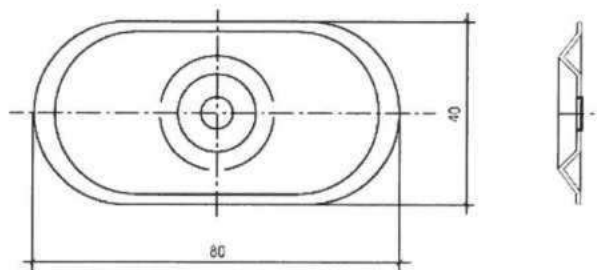
**KD-04-W5**

**Wkręt-Met Flat Roof Fasteners**

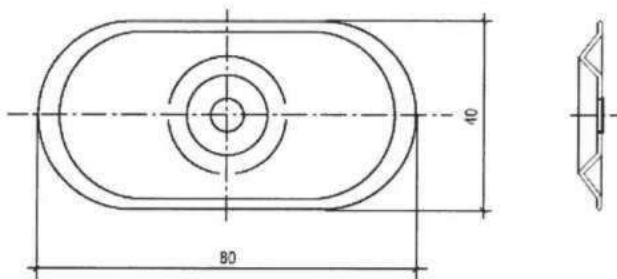
Stainless steel washer pads: KD-05 and KD-04-W5

**Annex 8**

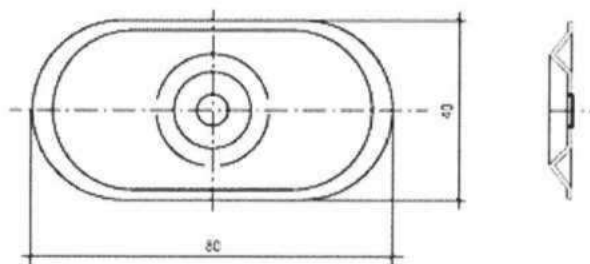
of European  
Technical Assessment  
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**KD-03-W5**



**KD-03-W7**



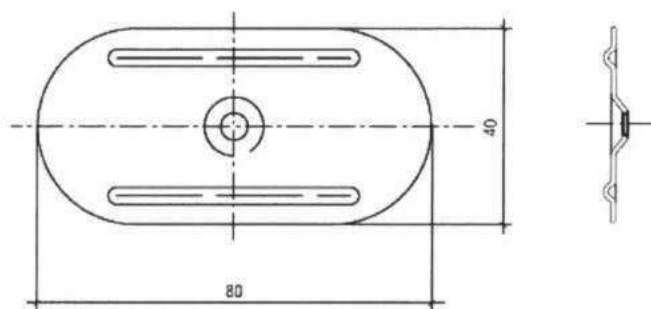
**KD-03-W9**

**Wkręt-Met Flat Roof Fasteners**

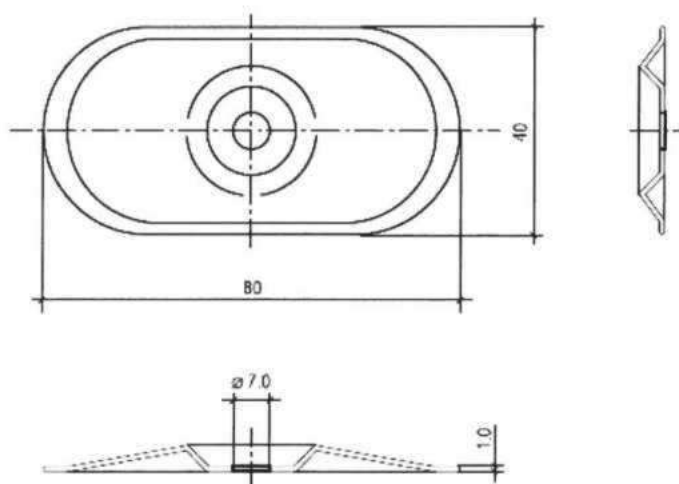
Stainless steel washer pads:  
KD-03-W5, KD-03-W7 and KD-03-W9

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**KD-03-P**



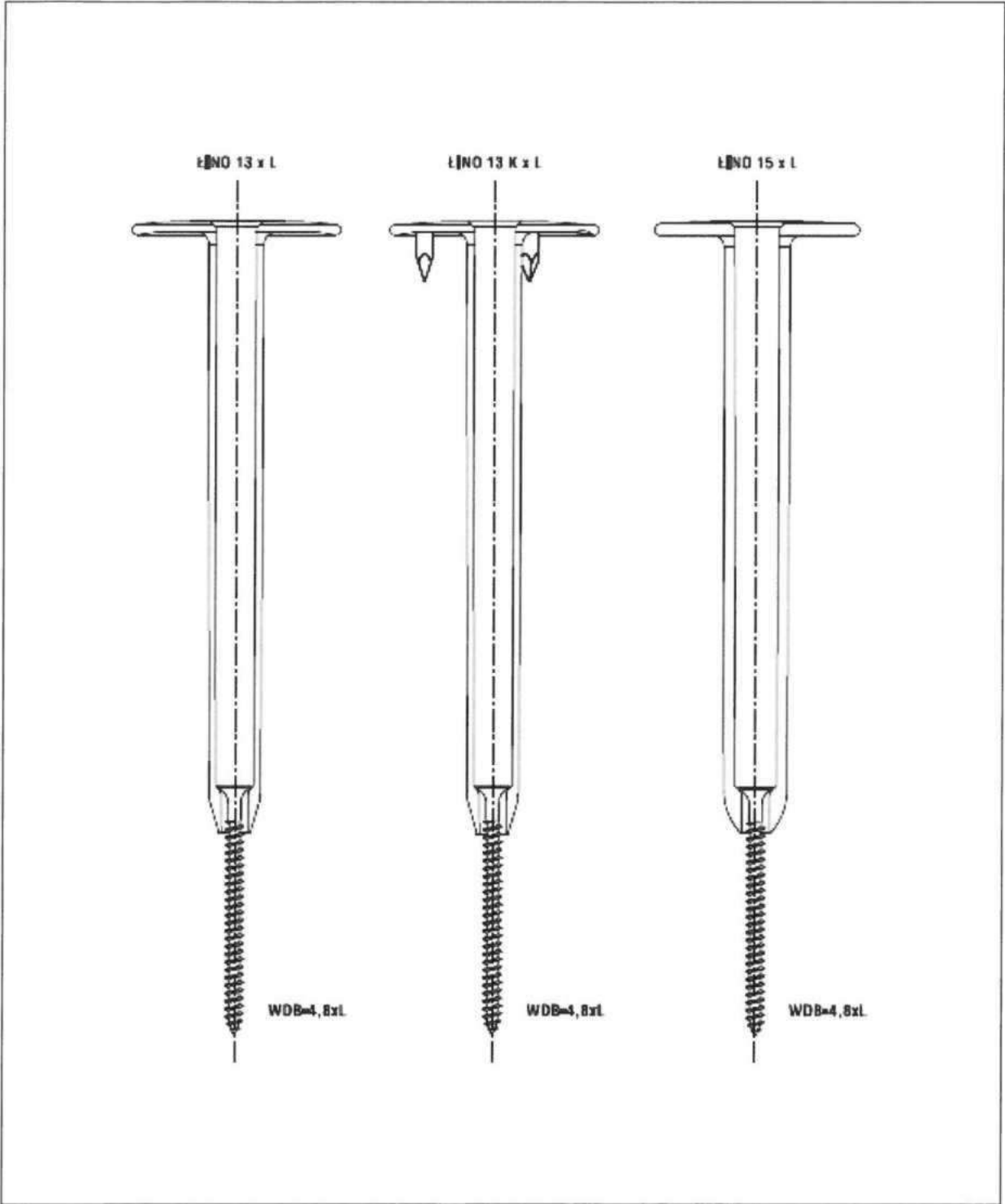
**KD-03-WW7**

**Wkręt-Met Flat Roof Fasteners**

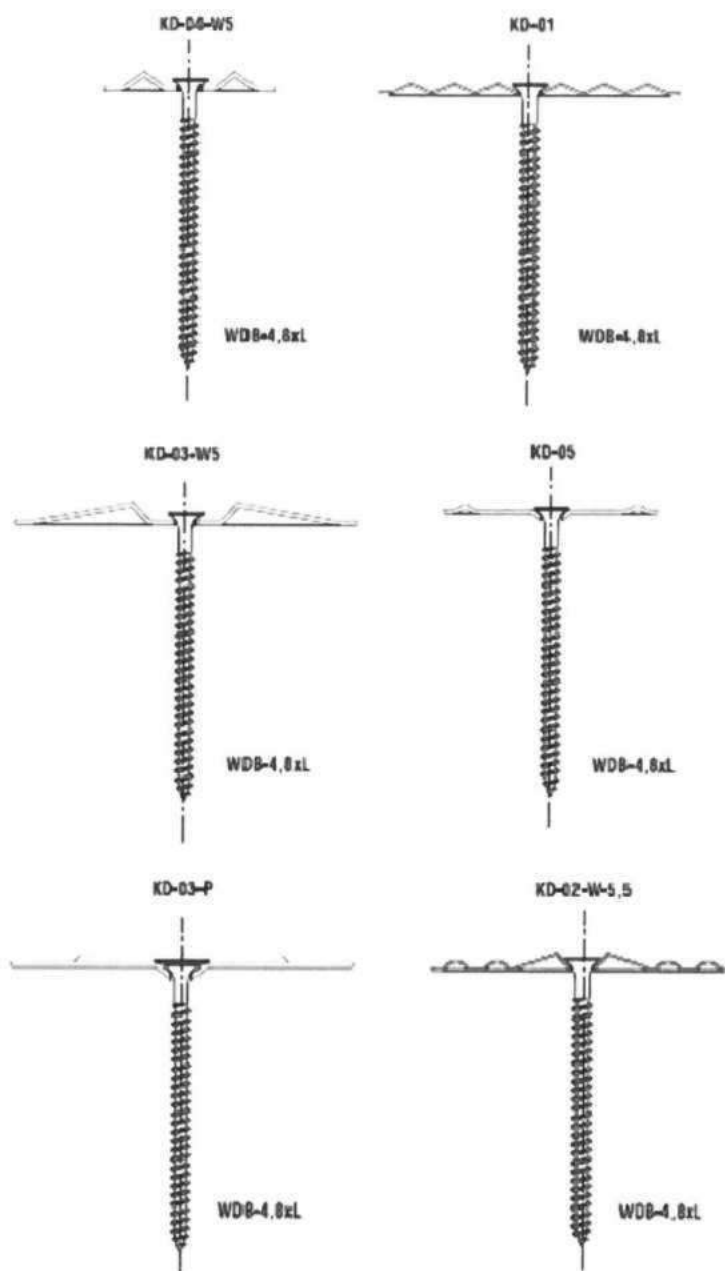
Stainless steel washer pads: KD-03-P and KD-03-WW7

**Annex10**  
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Technical Assessment  
ETA-15/0578





|                                                                                                                                             |                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| <b>Wkręt-Met Flat Roof Fasteners</b>                                                                                                        | <b>Annex 11</b><br>of European<br>Technical Assessment<br>ETA-15/0578 |
| Combination 1 ÷ 3<br>LINO 13 and WDB-4,8×L or WDB-T-4,8×L<br>LINO 13 K and WDB-4,8×L or WDB-T-4,8×L<br>LINO 15 and WDB-4,8×L or WDB-T-4,8×L |                                                                       |

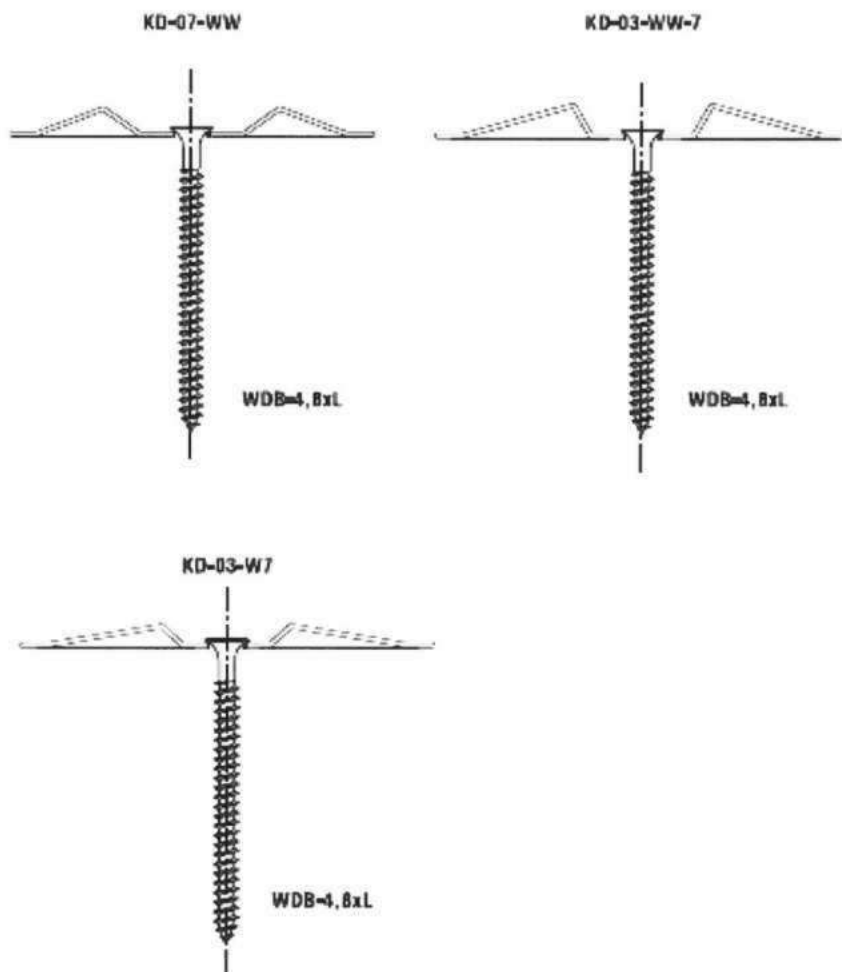


### Wkręt-Met Flat Roof Fasteners

Combination 4 ÷ 9

KD-04-W5 and WDB-4,8xL or WDB-T-4,8xL  
 KD-01 and WDB-4,8xL or WDB-T-4,8xL  
 KD-03-W5 and WDB-4,8xL or WDB-T-4,8xL  
 KD-05 and WDB-4,8xL or WDB-T-4,8xL  
 KD-03-P and WDB-4,8xL or WDB-T-4,8xL  
 KD-02-W5,5 and WDB-4,8xL or WDB-T-4,8xL

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 Technical Assessment  
 ETA-15/0578



### Wkręt-Met Flat Roof Fasteners

Combination 10 + 12

KD-07-WW and WDB-4,8xL or WDB-T-4,8xL

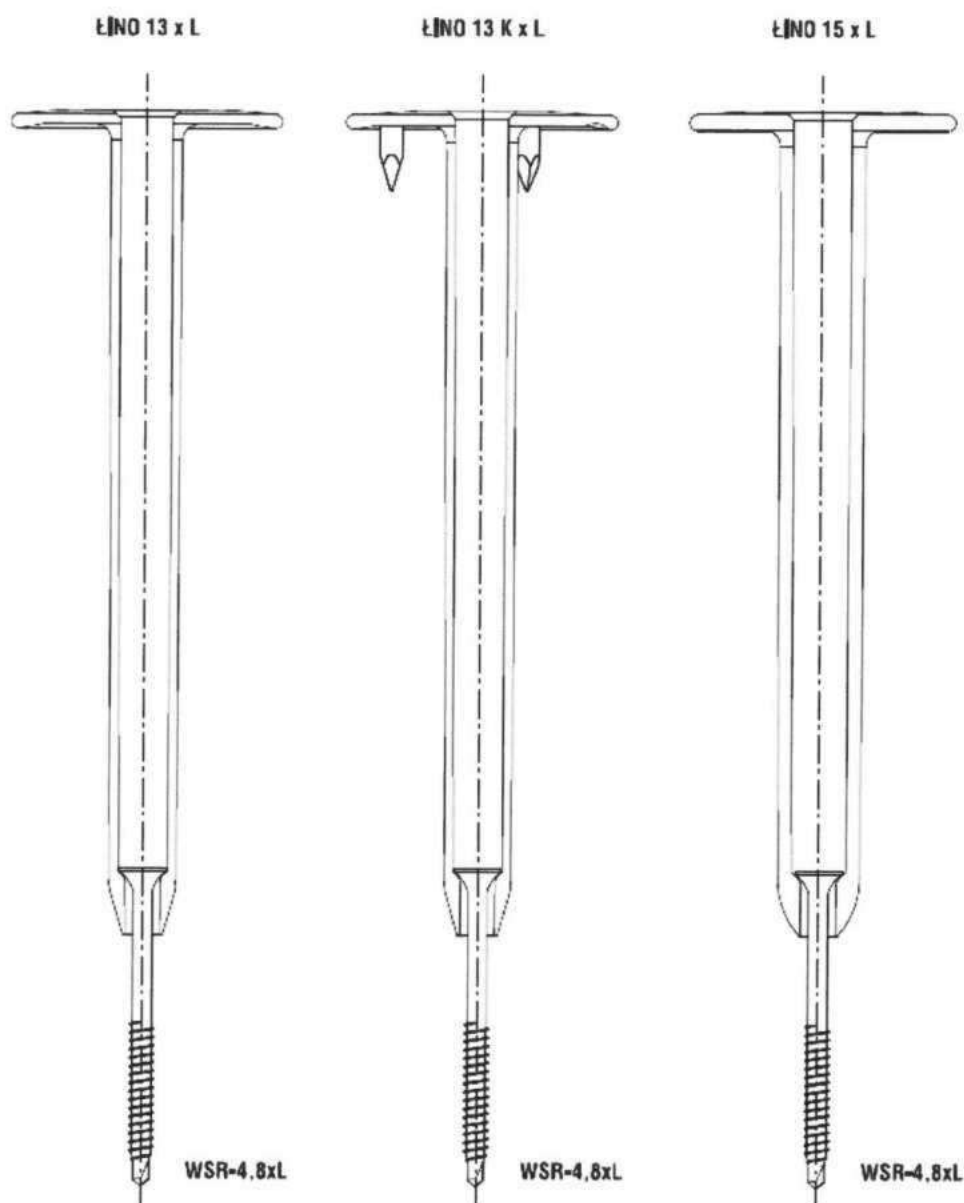
KD-03-WW-7 and WDB-4,8xL or WDB-T-4,8xL

KD-03-W7 and WDB-4,8xL or WDB-T-4,8xL

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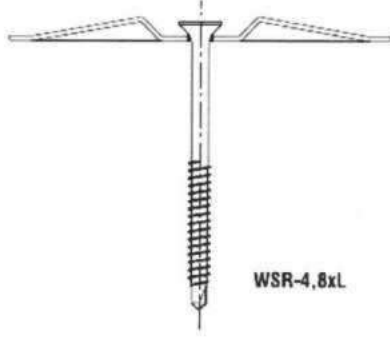
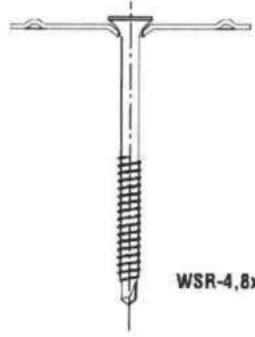
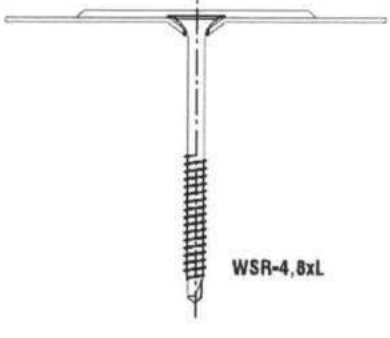


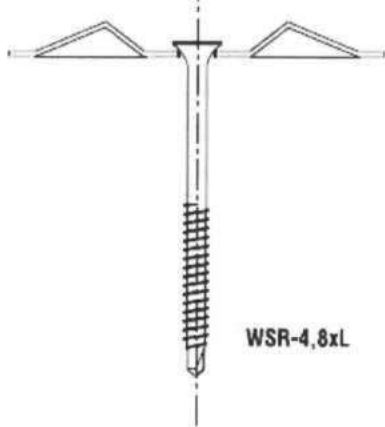
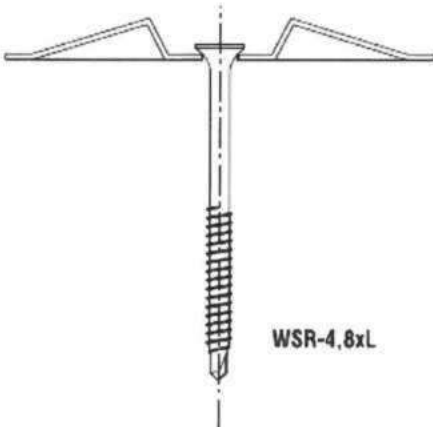
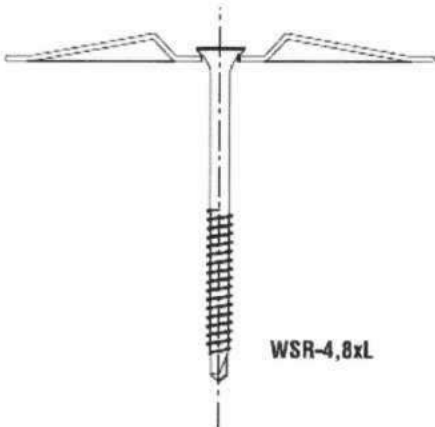


#### Wkręt-Met Flat Roof Fasteners

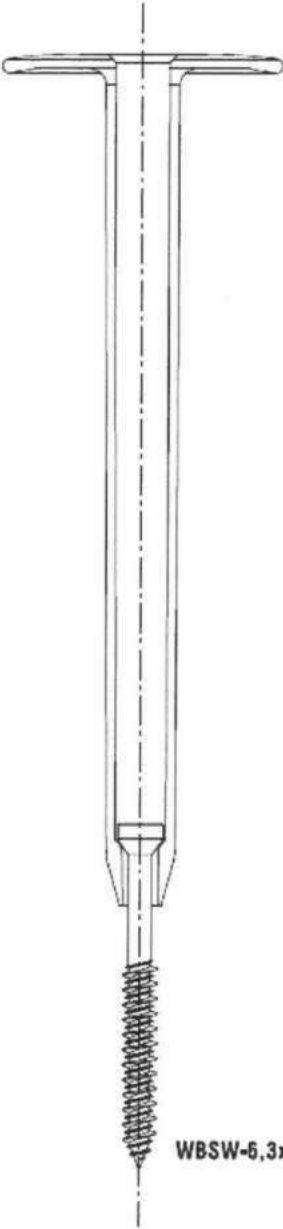
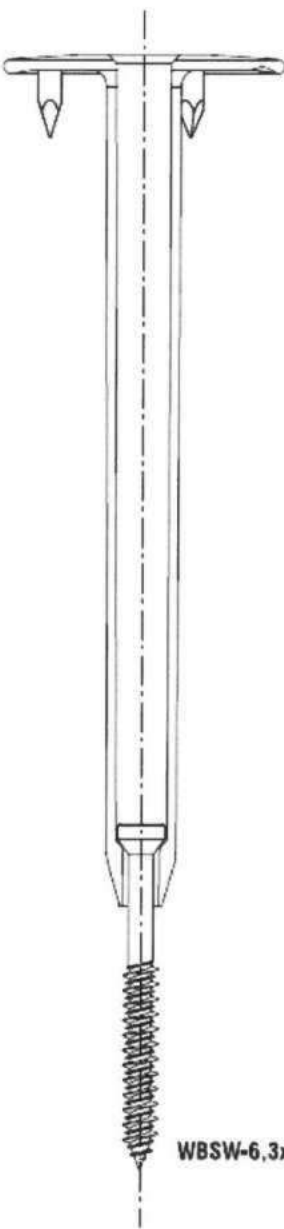
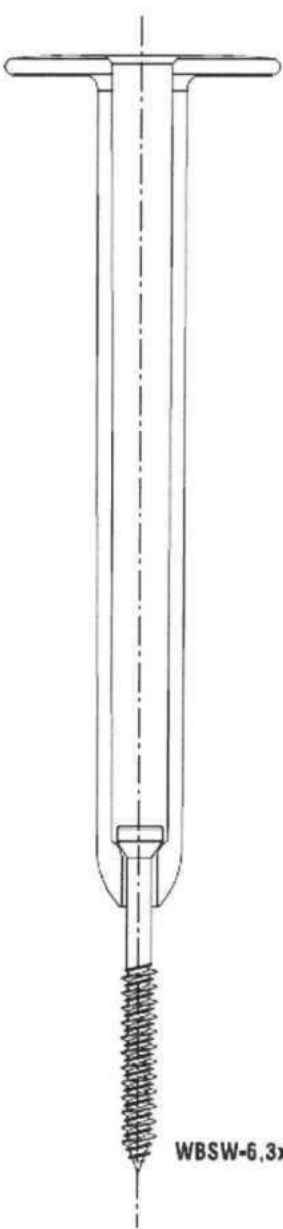
Combination 13 + 15  
 LINO 13 and WSR-4,8xL or WSR-T-4,8xL  
 LINO 13 K and WSR-4,8xL or WSR-T-4,8xL  
 LINO 15 and WSR-4,8xL or WSR-T-4,8xL

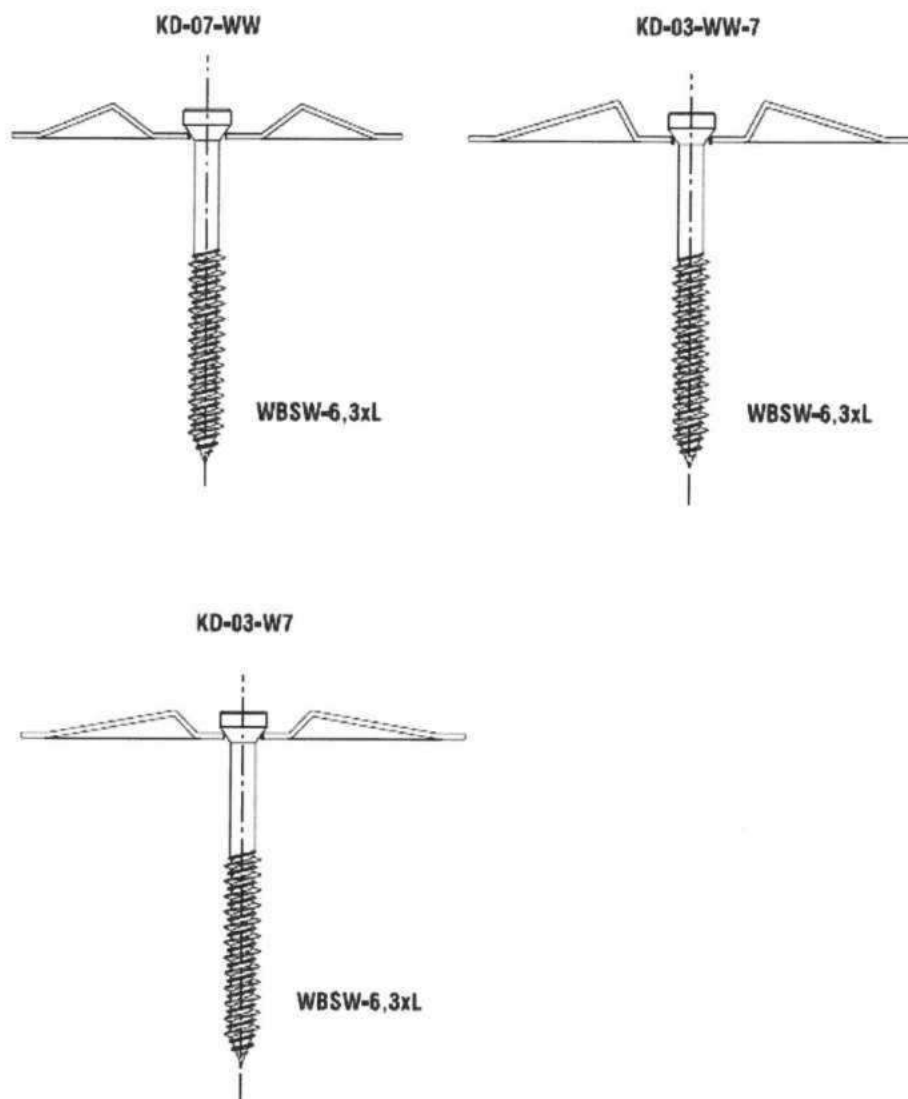
**Annex 14**  
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 Technical Assessment  
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| <div style="display: flex; flex-wrap: wrap; justify-content: space-around;"> <div style="text-align: center;"> <p><b>KD-04-W5</b></p>  <p>WSR-4,8xL</p> </div> <div style="text-align: center;"> <p><b>KD-01</b></p>  <p>WSR-4,8xL</p> </div> <div style="text-align: center;"> <p><b>KD-03-W5</b></p>  <p>WSR-4,8xL</p> </div> <div style="text-align: center;"> <p><b>KD-05</b></p>  <p>WSR-4,8xL</p> </div> <div style="text-align: center;"> <p><b>KD-03-P</b></p>  <p>WSR-4,8xL</p> </div> <div style="text-align: center;"> <p><b>KD-02-W-5,5</b></p>  <p>WSR-4,8xL</p> </div> </div> |                                                                                    |
| <p><b>Wkręt-Met Flat Roof Fasteners</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                    |
| <p>Combination 16 + 21</p> <p>KD-04-W5 and WSR-4,8xL or WSR-T-4,8xL</p> <p>KD-01 and WSR-4,8xL or WSR-T-4,8xL</p> <p>KD-03-W5 and WSR-4,8xL or WSR-T-4,8xL</p> <p>KD-05 and WSR-4,8xL or WSR-T-4,8xL</p> <p>KD-03-P and WSR-4,8xL or WSR-T-4,8xL</p> <p>KD-02-W-5,5 and WSR-4,8xL or WSR-T-4,8xL</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <p><b>Annex 15</b></p> <p>of European<br/>Technical Assessment<br/>ETA-15/0578</p> |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p><b>KD-07-WW</b></p>  <p><b>WSR-4,8xL</b></p> </div> <div style="text-align: center;"> <p><b>KD-03-WW7</b></p>  <p><b>WSR-4,8xL</b></p> </div> </div> <div style="text-align: center; margin-top: 20px;"> <p><b>KD-03-W7</b></p>  <p><b>WSR-4,8xL</b></p> </div> |  |
| <p><b>Wkręt-Met Flat Roof Fasteners</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |
| <p style="text-align: center;">Combination 22 ÷ 24</p> <p style="text-align: center;">KD-07-WW and WSR-4,8xL or WSR-T-4,8xL<br/>         KD-03-WW7 and WSR-4,8xL or WSR-T-4,8xL<br/>         KD-03-W7 and WSR-4,8xL or WSR-T-4,8xL</p>                                                                                                                                                                                                                                                                                                                                                                                                      |  |
| <p><b>Annex 16</b><br/>of European<br/>Technical Assessment<br/>ETA-15/0578</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |



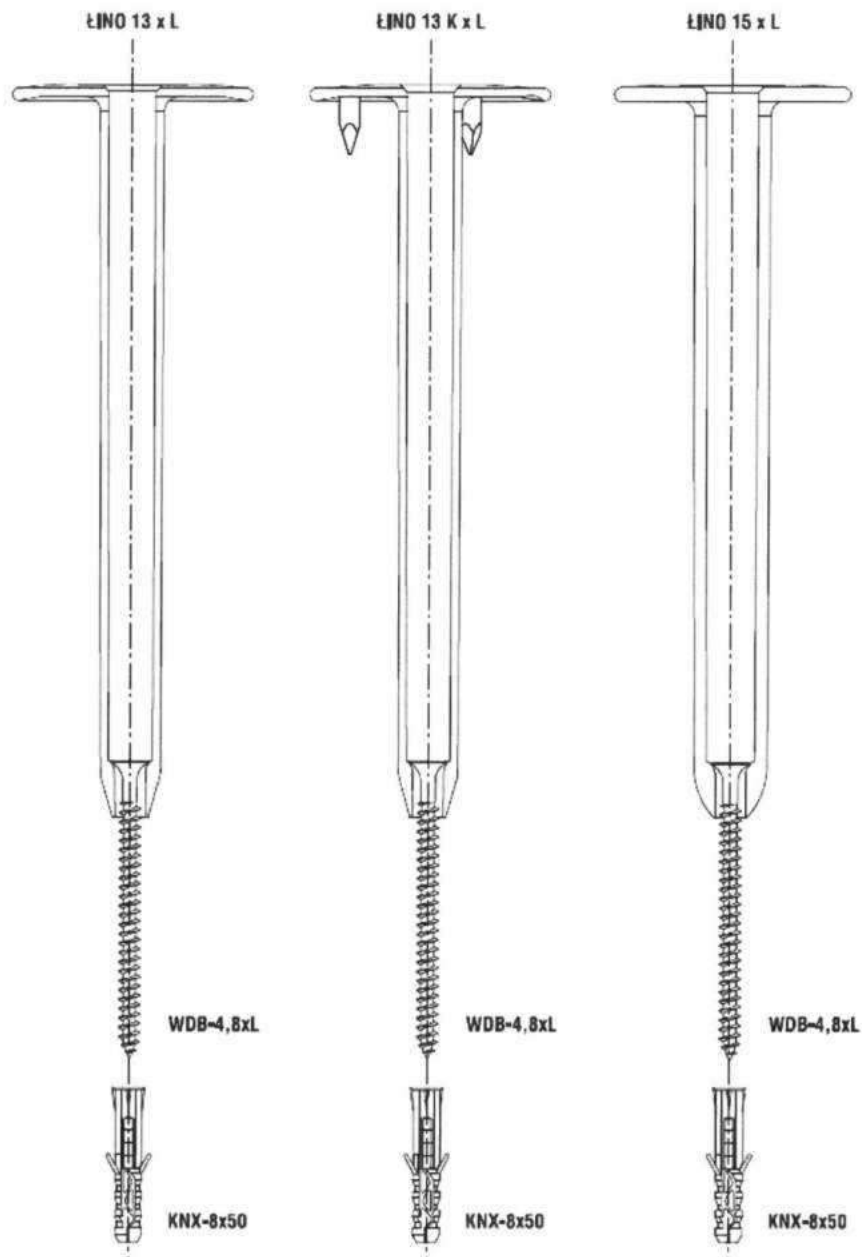
|                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| <div><div><div><div>ŁINO 13 x L</div><div>WBSW-6,3xL</div></div><div><div>ŁINO 13 K x L</div><div>WBSW-6,3xL</div></div><div><div>ŁINO 15 x L</div><div>WBSW-6,3xL</div></div></div></div> |                                                                                                   |
| <div>Wkręt-Met Flat Roof Fasteners</div>                                                                                                                                                                                                                                                                                                                                                                                                          | <div>Annex 17</div> <div>of European</div> <div>Technical Assessment</div> <div>ETA-15/0578</div> |
| <div>Combination 25 ÷ 27</div> <div>ŁINO 13 and WBSW-6,3xL</div> <div>ŁINO 13 K and WBSW-6,3xL</div> <div>ŁINO 15 and WBSW-6,3xL</div>                                                                                                                                                                                                                                                                                                            |                                                                                                   |



# **Wkręt-Met Flat Roof Fasteners**

Combination 28 + 30  
 KD-07-WW and WBSW-6,3xL  
 KD-03-WW7 and WBSW-6,3xL  
 KD-03-W7 and WBSW-6,3xL

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**Wkręt-Met Flat Roof Fasteners**

Combination 31 + 33

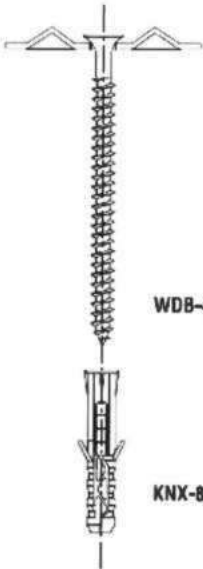
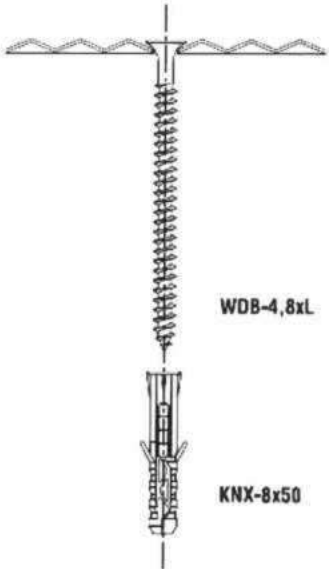
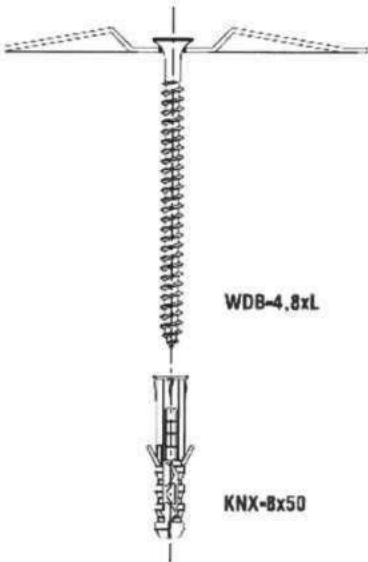
LINO 13 and WDB-4,8xL or WDB-T-4,8xL and KNX-8x50

LINO 13 K and WDB-4,8xL or WDB-T-4,8xL and KNX-8x50

LINO 15 and WDB-4,8xL or WDB-T-4,8xL and KNX-8x50

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p><b>KD-04-W5</b></p>  <p>WDB-4,8xL</p> <p>KNX-8x50</p> </div> <div style="text-align: center;"> <p><b>KD-01</b></p>  <p>WDB-4,8xL</p> <p>KNX-8x50</p> </div> </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 20px;"> <div style="text-align: center;"> <p><b>KD-03-W5</b></p>  <p>WDB-4,8xL</p> <p>KNX-8x50</p> </div> <div style="text-align: center;"> <p><b>KD-05</b></p>  <p>WDB-4,8xL</p> <p>KNX-8x50</p> </div> </div> | <p style="text-align: center;"><b>Annex 20</b><br/>of European<br/>Technical Assessment<br/>ETA-15/0578</p> |
| <p style="text-align: center;"><b>Wkręt-Met Flat Roof Fasteners</b></p> <p style="text-align: center;">Combination 34 ÷ 37</p> <p>KD-04-W5 and WDB-4,8xL or WDB-T-4,8xL and KNX-8x50</p> <p>KD-01 and WDB-4,8xL or WDB-T-4,8xL and KNX-8x50</p> <p>KD-03-W5 and WDB-4,8xL or WDB-T-4,8xL and KNX-8x50</p> <p>KD-05 and WDB-4,8xL or WDB-T-4,8xL and KNX-8x50</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                             |

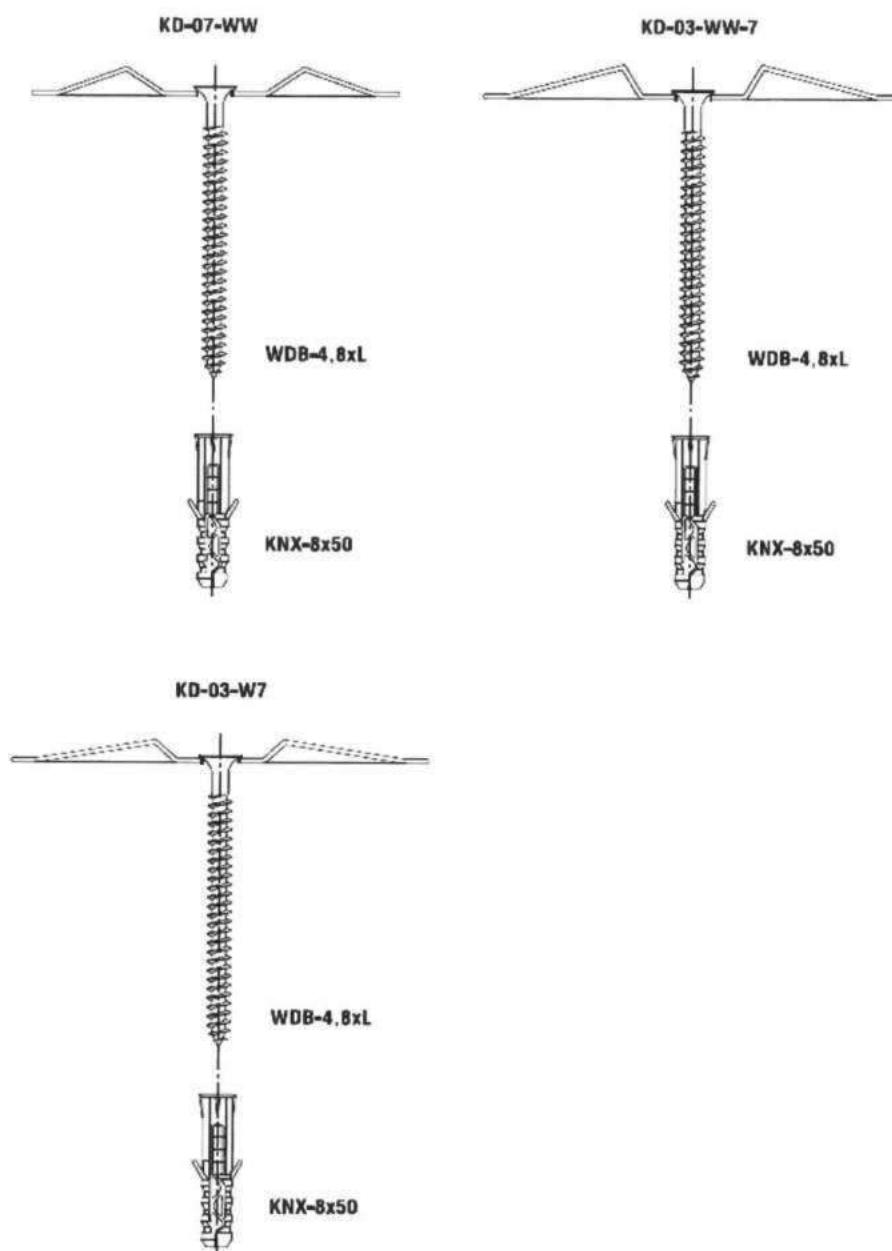
## Wkręt-Met Flat Roof Fasteners

Combination 38 ÷ 39

KD-03-P and WDB-4,8×L or WDB-T-4,8×L and KNX-8×50  
KD-02-W-5,5 and WDB-4,8×L or WDB-T-4,8×L and KNX-8×50

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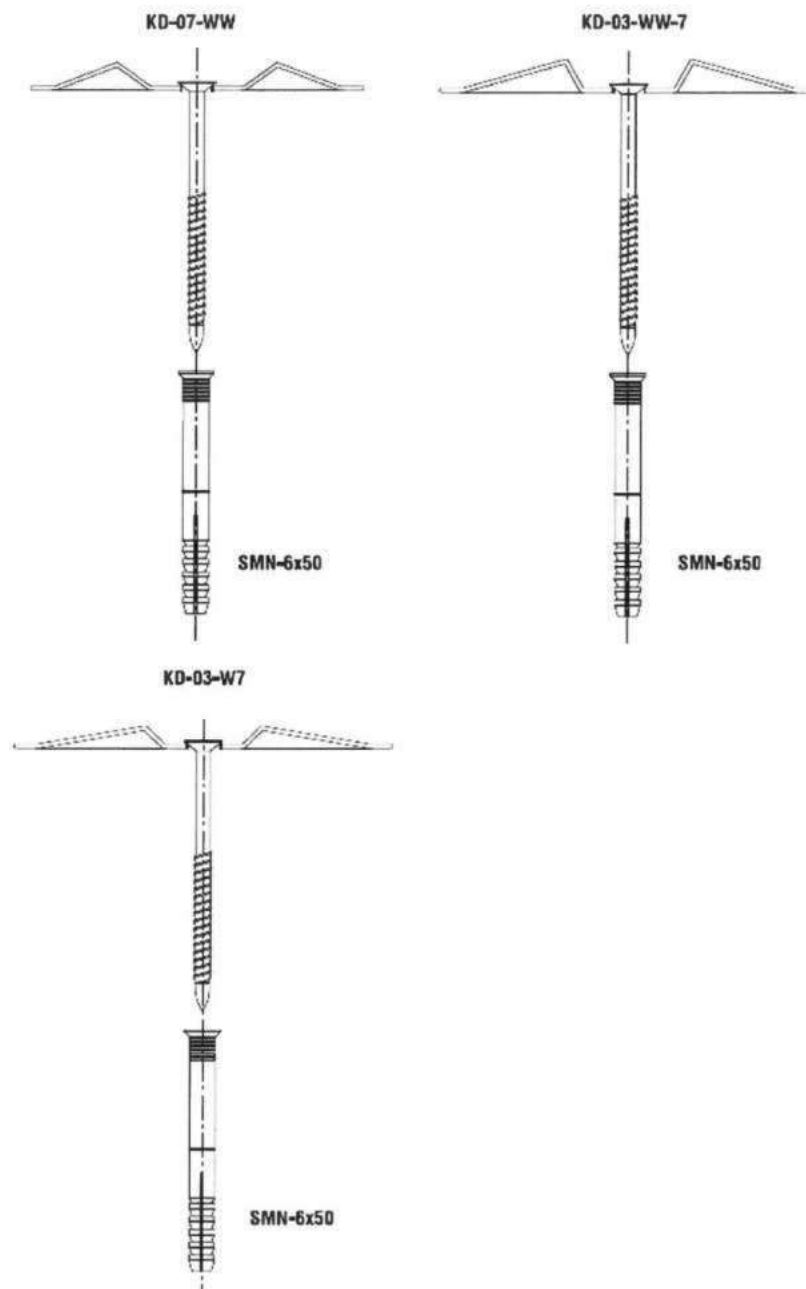


### Wkręt-Met Flat Roof Fasteners

Combination 40 ÷ 42

KD-07-WW and WDB-4,8xL or WDB-T-4,8xL and KNX-8x50  
 KD-03-WW-7 and WDB-4,8xL or WDB-T-4,8xL and KNX-8x50  
 KD-03-W7 and WDB-4,8xL or WDB-T-4,8xL and KNX-8x50

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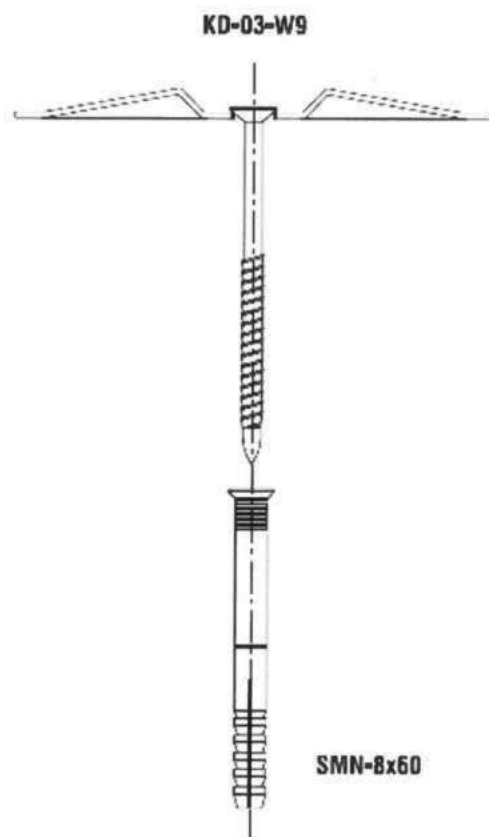


### Wkręt-Met Flat Roof Fasteners

Combination 43 + 45  
 KD-07-WW and SMN-6x50  
 KD-03-WW7 and SMN-6x50  
 KD-03-W7 and SMN-6x50

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 of European  
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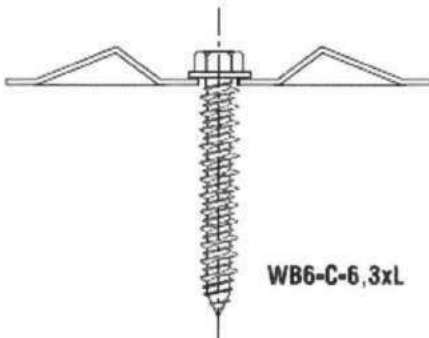
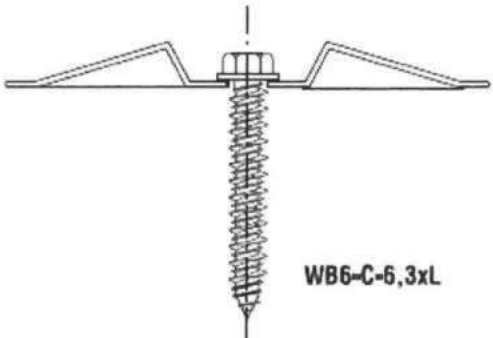
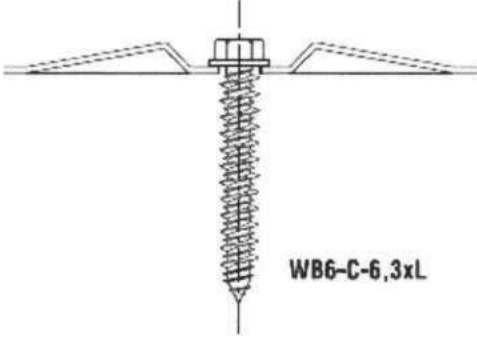
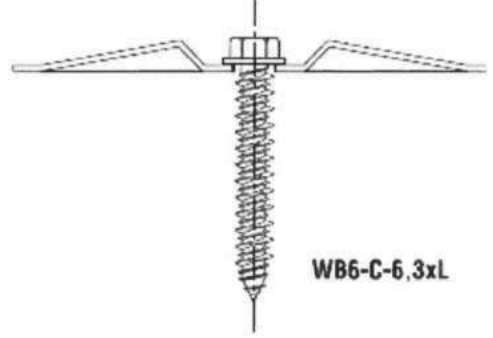




**Wkręt-Met Flat Roof Fasteners**

Combination 46  
KD-03-W9 and SMN-8x60

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| <div style="text-align: center;"> <p><b>KD-07-WW</b></p>  <p><b>WB6-C-6,3xL</b></p> </div> <div style="text-align: center; margin-top: 100px;"> <p><b>KD-03-WW-7</b></p>  <p><b>WB6-C-6,3xL</b></p> </div> <div style="text-align: center; margin-top: 100px;"> <p><b>KD-03-W-7</b></p>  <p><b>WB6-C-6,3xL</b></p> </div> <div style="text-align: center; margin-top: 100px;"> <p><b>KD-03-W-9</b></p>  <p><b>WB6-C-6,3xL</b></p> </div> |                                                                                 |
| <p><b>Wkręt-Met Flat Roof Fasteners</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <p><b>Annex 25</b><br/>of European<br/>Technical Assessment<br/>ETA-15/0578</p> |
| <p>Combination 47 ÷ 50<br/>KD-07-WW and WB6-C-6,3xL<br/>KD-03-WW7 and WB6-C-6,3xL<br/>KD-03-W7 and WB6-C-6,3xL<br/>KD-03-W9 and WB6-C-6,3xL</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                 |

| Characteristic values of axial load resistance [kN] |                               |                          |                                     |                  |                  |                                        |                    |                        |
|-----------------------------------------------------|-------------------------------|--------------------------|-------------------------------------|------------------|------------------|----------------------------------------|--------------------|------------------------|
| Ann. No.                                            | Wkręć-Met Flat Roof Fasteners |                          | Substrate                           |                  |                  |                                        |                    |                        |
|                                                     |                               |                          | Steel sheet S280GD acc. to EN 10346 |                  |                  | Wood class $\geq$ C24 acc. to EN 14081 | OSB acc. to EN 300 | Plywood acc. to EN 313 |
|                                                     | Screw                         | Washer with slave Washer | $t \geq 0,50$ mm                    | $t \geq 0,63$ mm | $t \geq 0,75$ mm | $h_{ef} = 30$ mm                       | $h_{ef} = 18$ mm   | $h_{ef} = 20$ mm       |
| 11                                                  | WDB-4,8 or WDB-T-4,8          | LINO 13 PA               | 0,78                                | 0,99             | 1,17             | 2,37                                   | 1,06               | 0,98                   |
| 11                                                  |                               | LINO 13K PA              | 0,78                                | 0,99             | 1,17             | 2,37                                   | 1,06               | 0,98                   |
| 11                                                  |                               | LINO 15 PE               | 0,78                                | 0,99             | 1,17             | 1,70                                   | 1,06               | 0,98                   |
| 11                                                  |                               | LINO 15 PP               | 0,78                                | 0,99             | 1,17             | 1,95                                   | 1,06               | 0,98                   |
| 12                                                  |                               | KD-01                    | 0,78                                | 0,99             | 1,17             | 1,67                                   | 1,06               | 0,98                   |
| 12                                                  |                               | KD-02-W-5,5              | 0,78                                | 0,99             | 1,17             | 2,06                                   | 1,06               | 0,98                   |
| 12                                                  |                               | KD-03-P                  | 0,78                                | 0,99             | 1,17             | 2,50                                   | 1,06               | 0,98                   |
| 12                                                  |                               | KD-03-W5                 | 0,78                                | 0,99             | 1,17             | 2,84                                   | 1,06               | 0,98                   |
| 12                                                  |                               | KD-04-W5                 | 0,78                                | 0,99             | 1,17             | 3,23                                   | 1,06               | 0,98                   |
| 12                                                  |                               | KD-05                    | 0,78                                | 0,99             | 1,17             | 3,12                                   | 1,06               | 0,98                   |
| 13                                                  |                               | KD-03-W7                 | 0,78                                | 0,99             | 1,17             | 2,46                                   | 1,06               | 0,98                   |
| 13                                                  |                               | KD-03-WW7                | 0,78                                | 0,99             | 1,17             | 3,45                                   | 1,06               | 0,98                   |
| 13                                                  |                               | KD-07-WW                 | 0,78                                | 0,99             | 1,17             | 2,90                                   | 1,06               | 0,98                   |

| Characteristic values of axial load resistance [kN] |                               |                          |                                     |                  |                  |                  |                  |
|-----------------------------------------------------|-------------------------------|--------------------------|-------------------------------------|------------------|------------------|------------------|------------------|
| Ann. No.                                            | Wkręć-Met Flat Roof Fasteners |                          | Substrate                           |                  |                  |                  |                  |
|                                                     |                               |                          | Steel sheet S280GD acc. to EN 10346 |                  |                  |                  |                  |
|                                                     | Screw                         | Washer with slave Washer | $t \geq 0,50$ mm                    | $t \geq 0,63$ mm | $t \geq 0,75$ mm | $t \geq 0,88$ mm | $t \geq 1,00$ mm |
| 14                                                  | WSR-4,8 or WSR-T-4,8          | LINO 13 PA               | 0,84                                | 1,03             | 1,20             | 1,53             | 1,61             |
| 14                                                  |                               | LINO 13K PA              | 0,84                                | 1,03             | 1,20             | 1,53             | 1,61             |
| 14                                                  |                               | LINO 15 PE               | 0,84                                | 1,03             | 1,20             | 1,53             | 1,61             |
| 14                                                  |                               | LINO 15 PP               | 0,84                                | 1,03             | 1,20             | 1,53             | 1,61             |
| 15                                                  |                               | KD-01                    | 0,84                                | 1,03             | 1,20             | 1,53             | 1,61             |
| 15                                                  |                               | KD-02-W-5,5              | 0,84                                | 1,03             | 1,20             | 1,53             | 1,61             |
| 15                                                  |                               | KD-03-P                  | 0,84                                | 1,03             | 1,20             | 1,53             | 1,61             |
| 15                                                  |                               | KD-03-W5                 | 0,84                                | 1,03             | 1,20             | 1,53             | 1,61             |
| 15                                                  |                               | KD-04-W5                 | 0,84                                | 1,03             | 1,20             | 1,53             | 1,61             |
| 15                                                  |                               | KD-05                    | 0,84                                | 1,03             | 1,20             | 1,53             | 1,61             |
| 16                                                  |                               | KD-03-W7                 | 0,84                                | 1,03             | 1,20             | 1,53             | 1,61             |
| 16                                                  |                               | KD-03-WW7                | 0,84                                | 1,03             | 1,20             | 1,53             | 1,61             |
| 16                                                  |                               | KD-07-WW                 | 0,84                                | 1,03             | 1,20             | 1,53             | 1,61             |

**Wkręć-Met Flat Roof Fasteners**

Characteristic values of axial load resistance

**Annex 26**

 of European  
Technical Assessment  
ETA-15/0578

| Characteristic values of axial load resistance [kN] |                                                |                           |                                   |                                  |                                               |                                                                |                                  |                                               |
|-----------------------------------------------------|------------------------------------------------|---------------------------|-----------------------------------|----------------------------------|-----------------------------------------------|----------------------------------------------------------------|----------------------------------|-----------------------------------------------|
| Ann. No.                                            | Wkręt-Met Flat Roof Fasteners                  |                           | Substrate                         |                                  |                                               |                                                                |                                  |                                               |
|                                                     |                                                |                           | Wood class ≥ C24 acc. to EN 14081 | OSB acc. to EN 300               | Plywood acc. to EN 313                        | Concrete ≥ C12/15 acc. to EN 206                               | Concrete ≥ C20/25 acc. to EN 206 | Precast concrete slab ≥ C20/25 acc. to EN 206 |
|                                                     | Screw                                          | Washer with slave /Washer | h <sub>ef</sub> = 30 mm           | h <sub>ef</sub> = 18 mm          | h <sub>ef</sub> = 20 mm                       | h <sub>ef</sub> = 30 mm                                        | h <sub>ef</sub> = 30 mm          | h <sub>ef</sub> = 20 mm                       |
| 17                                                  | WBSW                                           | LINO 13 PA                | 2,32                              | 1,68                             | 2,32                                          | 1,64                                                           | 2,12                             | 1,92                                          |
| 17                                                  |                                                | LINO 13K PA               | 2,32                              | 1,68                             | 2,32                                          | 1,64                                                           | 2,12                             | 1,92                                          |
| 17                                                  |                                                | LINO 15 PE                | 2,03                              | 1,68                             | 2,03                                          | 1,57                                                           | 2,03                             | 1,92                                          |
| 17                                                  |                                                | LINO 15 PP                | 2,16                              | 1,68                             | 2,16                                          | 1,64                                                           | 2,12                             | 1,92                                          |
| 18                                                  |                                                | KD-03-W7                  | 3,04                              | 1,68                             | 3,56                                          | 1,64                                                           | 2,12                             | 1,92                                          |
| 18                                                  |                                                | KD-03-WW7                 | 3,04                              | 1,68                             | 3,62                                          | 1,64                                                           | 2,12                             | 1,92                                          |
| 18                                                  |                                                | KD-07-WW                  | 3,04                              | 1,68                             | 3,30                                          | 1,64                                                           | 2,12                             | 1,92                                          |
| Characteristic values of axial load resistance [kN] |                                                |                           |                                   |                                  |                                               |                                                                |                                  |                                               |
| Ann. No.                                            | Wkręt-Met Flat Roof Fasteners                  |                           | Substrate                         |                                  |                                               |                                                                |                                  |                                               |
|                                                     |                                                |                           | Concrete ≥ C12/15 acc. to EN 206  | Concrete ≥ C20/25 acc. to EN 206 | Precast concrete slab ≥ C20/25 acc. to EN 206 |                                                                |                                  |                                               |
|                                                     | Screw                                          | Washer with slave /Washer | h <sub>ef</sub> = 30 mm           | h <sub>ef</sub> = 30 mm          | h <sub>ef</sub> = 20 mm                       |                                                                |                                  |                                               |
| 19                                                  | WDB-4,8 +KNX 8×50<br>or<br>WDB-T-4,8 +KNX 8×50 | LINO 13 PA                | 1,12                              | 1,45                             | 1,20                                          |                                                                |                                  |                                               |
| 19                                                  |                                                | LINO 13K PA               | 1,12                              | 1,45                             | 1,20                                          |                                                                |                                  |                                               |
| 19                                                  |                                                | LINO 15 PE                | 1,12                              | 1,45                             | 1,20                                          |                                                                |                                  |                                               |
| 19                                                  |                                                | LINO 15 PP                | 1,12                              | 1,45                             | 1,20                                          |                                                                |                                  |                                               |
| 20                                                  |                                                | KD-01                     | 1,12                              | 1,45                             | 1,20                                          |                                                                |                                  |                                               |
| 20                                                  |                                                | KD-03-W5                  | 1,12                              | 1,45                             | 1,20                                          |                                                                |                                  |                                               |
| 20                                                  |                                                | KD-04-W5                  | 1,12                              | 1,45                             | 1,20                                          |                                                                |                                  |                                               |
| 20                                                  |                                                | KD-05                     | 1,12                              | 1,45                             | 1,20                                          |                                                                |                                  |                                               |
| 21                                                  |                                                | KD-02-W-5,5               | 1,12                              | 1,45                             | 1,20                                          |                                                                |                                  |                                               |
| 21                                                  |                                                | KD-03-P                   | 1,12                              | 1,45                             | 1,20                                          |                                                                |                                  |                                               |
| 22                                                  |                                                | KD-03-W7                  | 1,12                              | 1,45                             | 1,20                                          |                                                                |                                  |                                               |
| 22                                                  |                                                | KD-03-WW7                 | 1,12                              | 1,45                             | 1,20                                          |                                                                |                                  |                                               |
| 22                                                  |                                                | KD-07-WW                  | 1,12                              | 1,45                             | 1,20                                          |                                                                |                                  |                                               |
| 25                                                  |                                                | WB6                       | KD-03-W7                          | 2,31                             | 2,98                                          | 2,10                                                           |                                  |                                               |
| 25                                                  |                                                |                           | KD-03-WW7                         | 2,31                             | 2,98                                          | 2,10                                                           |                                  |                                               |
| 25                                                  | KD-07-WW                                       |                           | 2,31                              | 2,98                             | 2,10                                          |                                                                |                                  |                                               |
| 25                                                  | KD-03-W9                                       |                           | 2,31                              | 2,98                             | 2,10                                          |                                                                |                                  |                                               |
| Wkręt-Met Flat Roof Fasteners                       |                                                |                           |                                   |                                  |                                               | Annex 27<br>of European<br>Technical Assessment<br>ETA-15/0578 |                                  |                                               |
| Characteristic values of axial load resistance      |                                                |                           |                                   |                                  |                                               |                                                                |                                  |                                               |



| Characteristic values of axial load resistance [kN] |                                  |           |                                  |                                  |
|-----------------------------------------------------|----------------------------------|-----------|----------------------------------|----------------------------------|
| Ann.<br>No.                                         | Wkręt-Met<br>Flat Roof Fasteners |           | Substrate                        |                                  |
|                                                     |                                  |           | Concrete ≥ C12/15 acc. to EN 206 | Concrete ≥ C20/25 acc. to EN 206 |
|                                                     | Screw                            | Washer    | $h_{ef} = 30 \text{ mm}$         | $h_{ef} = 30 \text{ mm}$         |
| 23                                                  | SMN 6×50                         | KD-03-W7  | 0,79                             | 1,02                             |
| 23                                                  |                                  | KD-03-WW7 | 0,79                             | 1,02                             |
| 23                                                  |                                  | KD-07-WW  | 0,79                             | 1,02                             |
| 24                                                  | SMN 8×60                         | KD-03-W9  | 1,18                             | 1,52                             |

|                                                |                                                                       |
|------------------------------------------------|-----------------------------------------------------------------------|
| <b>Wkręt-Met Flat Roof Fasteners</b>           | <b>Annex 28</b><br>of European<br>Technical Assessment<br>ETA-15/0578 |
| Characteristic values of axial load resistance |                                                                       |



**Instytut Ceramiki  
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Budowlanych**

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**02-676 Warszawa, ul. Postępu 9**  
tel. (+48 22) 549 97 04, e-mail: [certyfikacja@icimb.pl](mailto:certyfikacja@icimb.pl); [www.icimb.pl](http://www.icimb.pl)



AC 008

# **CERTIFICATE**

## **OF PRODUCT COMPLIANCE WITH THE POLISH STANDARD**

### **104/N/13<sup>1)</sup>**

*According to the type 5 of the PN EN ISO/IEC 17067 :2014-01 Conformity assessment - Fundamentals of product certification and guidelines for product certification schemes and to Certification programme No. PC-02*

is it hereby declared that:

**Dry-pressed ceramic tiles with low water absorption**

**$E_b \leq 0,5\%$ , Group BI<sub>a</sub>**  
**glazed, unglazed, unglazed polished**

placed on the market by:

**ROVESE SA**  
**Al. Solidarności 36**  
**25-323 Kielce**

produced in the factories:

**CERSANIT III S.A., ul. Uczniowska 21, 58-306 Wałbrzych**  
**OPOCZNO I Sp. z o.o., ul. Przemysłowa 5, 26-300 Opoczno**

comply with the requirements of  
the standard:

according to the test report  
prepared by:

report No. and date:

**PN-EN 14411:2013-04 Ceramic tiles - Definitions, classification,  
characteristics, evaluation of conformity and marking Annex (normative) G**

Laboratorium Badawcze Instytutu Ceramiki i Materiałów Budowlanych  
ul. Postępu 9, 02-676 Warszawa

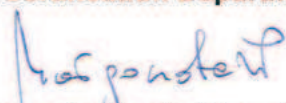
**No 132/3/LB/2011 - 05.01.2012.**

**Certificate valid from 29 August 2016<sup>1)</sup> to 03 December 2018**

refers exclusively to items which have identical properties (parameters) with the model (models) submitted for testing and which comply with the requirements defined above.

The right to use the certificate shall remain in force provided that the manufacturer complies with the requirements included in the *Certification Programme PC-02* and in the standard referred to above.

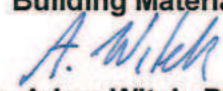
**Head  
of the Certification Department**

  
**M Sc Małgorzata Warda-Pruszkowska**

<sup>1)</sup> *verte!*



**Director  
of the Institute of Ceramics and  
Building Materials**

  
**PhD, Eng. Adam Witek, Prof. of ICiMB**

Warszawa, update 29.08.2016r.

<sup>1)</sup> This updated certificate of 29.08.2016 replaces certificate 104/N/13 of 04.12.2013. and is a confirmation of certification of the product compliance with the polish standard provided on 04.12.2013.  
The update concerns the amendment of the reference document which is the basis for granting certification.



Prohlášení o vlastnostech  
Declaration of performance No. 5100806001  
Leistungserklärung

**fatra**

*V souladu s nařízením Evropského parlamentu a Rady (EU) 305/2011 /In accordance with Regulation EU No. 305/2011/Gemäß EU-Verordnung Nr. 305/2011*

|        |                                                                                                                                                                                                       |                                                                                                                        |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| 1      | <b>Jedinečný identifikační kód typu výrobku</b><br><b>Unique identification code of the product type</b><br><b>Eindeutiger Kenncode des Produkttyps</b>                                               | FATRAFOL 810 - T1<br>5100806001                                                                                        |
| 2      | <b>Zamýšlené použití</b><br><b>Intended use of the construction product</b><br><b>Vom Hersteller vorgesehener Verwendungszweck</b>                                                                    | Hydroizolace střech.<br>Waterproofing of roofs.<br>Abdichtung von Dächern.                                             |
| 3      | <b>Výrobce</b><br><b>Manufacturer</b><br><b>Hersteller</b>                                                                                                                                            | Fatra, a.s.<br>Třída Tomáše Bati 1541<br>763 61 Napajedla<br>Czech Republic                                            |
| 4      | <b>Zplnomocněný zástupce</b><br><b>Authorised representative</b><br><b>Bevollmächtigter Vertreter</b>                                                                                                 | -                                                                                                                      |
| 5      | <b>Systém posuzování a ověřování vlastností</b><br><b>System of assessment and verification of constancy of performance</b><br><b>System zur Bewertung und Überprüfung der Leistungsbeständigkeit</b> | 2+                                                                                                                     |
| 6<br>a | <b>Harmonizovaná norma</b><br><b>Harmonised norm</b><br><b>Harmonisierte Norm</b>                                                                                                                     | EN 13956:2012                                                                                                          |
|        | <b>Oznámený subjekt</b><br><b>Notified body</b><br><b>Notifizierten Person</b>                                                                                                                        | Centrum stavebního inženýrství, a.s., č.<br>K Cihelně 304, 764 32 Zlín-Louky,<br>oznámený subjekt / notified body 1390 |
| b      | <b>Evropský dokument pro posuzování</b><br><b>European Assessment Document (EAD)</b><br><b>Europäische Technische Bewertung Document</b>                                                              | -                                                                                                                      |
|        | <b>Evropské technické posouzení</b><br><b>European Technical Assessment (ETA)</b><br><b>Europäische Technische Bewertung</b>                                                                          | -                                                                                                                      |
|        | <b>Subjekt pro technické posuzování</b><br><b>Technical Assessment Body</b><br><b>Technische Bewertung Person</b>                                                                                     | -                                                                                                                      |
|        | <b>Oznámený subjekt</b><br><b>Notified body</b><br><b>Notifizierten Person</b>                                                                                                                        | -<br>-                                                                                                                 |

**fatra**

**WWW.FATRAFOL.CZ**

**WWW.FATRA.CZ**



**Responsible Care®**  
OUR COMMITMENT TO SUSTAINABILITY



| 7                                                                                                                 | Seznam základních charakteristik /Declared performance /Erklärte Leistung: |                                                          |            |                                                 |            |                                                   |
|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------|------------|-------------------------------------------------|------------|---------------------------------------------------|
| Základní charakteristiky<br>Essential characteristics<br>Wesentliche Merkmale                                     |                                                                            | Vlastnosti<br>Performance<br>Leistung                    |            |                                                 |            | Zkušební normy<br>Test method<br>Prüfmethode      |
| Tloušťka<br>Thickness<br>Dicke                                                                                    |                                                                            | 1,20<br>mm                                               | 1,50<br>mm | 1,80<br>mm                                      | 2,00<br>mm | EN 1849-2                                         |
| Chování při vnějším požáru<br>External fire performance<br>Feuer von außen                                        |                                                                            | B <sub>ROOF</sub> (t1)                                   |            |                                                 |            | EN 13501-5                                        |
| Reakce na oheň<br>Reaction to fire<br>Reaktion bei Brandeinwirkung                                                |                                                                            | E                                                        |            |                                                 |            | EN 13501-1                                        |
| Vodotěsnost při 400 kPa<br>Watertightness 400 kPa<br>Wasserdichtheit 400 kPa                                      |                                                                            | Vyhovuje<br>Pass<br>Entspricht                           |            |                                                 |            | EN 1928<br>Metoda B<br>Method B<br>Verfahren B    |
| Nejvyšší tahová síla<br>Maximum tensile force<br>Höchstzugkraft                                                   |                                                                            | ≥ 1000/950<br>N/50 mm                                    |            |                                                 |            | EN 12311-2<br>Metoda A<br>Method A<br>Verfahren A |
| Protažení při nejvyšší tahové síle<br>Elongation at maximum tensile force<br>Dehnung bei Höchstzugkraft           |                                                                            | ≥ 15/15<br>%                                             |            |                                                 |            | EN 12311-2<br>Metoda A<br>Method A<br>Verfahren A |
| Odolnost proti prorůstání kořenů<br>Resistance to root penetration<br>Widerstand gegen Durchwurzlung              |                                                                            | Vyhovuje<br>Pass<br>Entspricht                           |            |                                                 |            | EN 13948<br>FLL test                              |
| Odolnost proti statickému zatížení<br>Resistance to static load<br>Widerstandsfähigkeit gegen statische Belastung |                                                                            | Vyhovuje 20 kg<br>Satisfies 20 kg<br>Erfüllt 20 kg       |            |                                                 |            | EN 12730<br>Metoda B<br>Method B<br>Verfahren B   |
| Odolnost proti nárazu<br>Impact resistance<br>Stoßfestigkeit                                                      |                                                                            | Vyhovuje<br>Satisfies<br>Erfüllt                         |            | EN 12691<br>Metoda A<br>Method A<br>Verfahren A |            |                                                   |
|                                                                                                                   |                                                                            | 1000<br>mm                                               | 1250 mm    |                                                 |            |                                                   |
|                                                                                                                   |                                                                            | Vyhovuje 2000 mm<br>Satisfies 2000 mm<br>Erfüllt 2000 mm |            | EN 12691<br>Metoda B<br>Method B<br>Verfahren B |            |                                                   |
| Odolnost proti protrhávání<br>Tear resistance<br>Weiterreißwiderstand                                             |                                                                            | ≥ 180/180<br>N                                           |            |                                                 |            | EN 12310-2                                        |
| Odolnost spoje ve smyku<br>Joint shear resistance<br>Scherwiderstand der Fügenaht                                 |                                                                            | ≥ 900/850<br>N/50 mm                                     |            |                                                 |            | EN 12317-2                                        |
| Odolnost v odlupování                                                                                             |                                                                            | ≥ 260/260                                                |            |                                                 |            | EN 12316-2                                        |

|                                                                                                                                                                             |                                                           |          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|----------|
| Resistance to peeling<br>Schälwiderstand der Fügenaht                                                                                                                       | N/50 mm                                                   |          |
| Ohebnost za nízkých teplot<br>Foldability at low temperature<br>Falzverhalten bei tiefer Temperatur                                                                         | ≤ -25 °C                                                  | EN 495-5 |
| Vystavení UV záření, zvýšené teplotě a vodě<br>Exposure to UV radiation, elevated temperature and water<br>Beanspruchung durch UV-Bestrahlung erhöhte Temperatur und Wasser | Vyhovuje, stupeň 0<br>Pass, class 0<br>Entspricht, grad 0 | EN 1297  |

Vlastností výše uvedeného výrobku jsou ve shodě se souborem deklarovaných vlastností. Toto prohlášení o vlastnostech se v souladu s nařízením (EU) č.305/2011 vydává na výhradní odpovědnost výrobce uvedeného výše.

The performance of the product identified above is in conformity with the set of declared performances. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Die Leistung des vorstehenden Produkts entspricht der erklärten Leistungen. Für die Erstellung der Leistungserklärung im Einklang mit der Verordnung (EU) Nr.305/2011 ist allein der obengenannte Hersteller verantwortlich.

Podepsáno za výrobce a jeho jménem / Signed for and on behalf of the manufacturer by / Unterzeichnet für den Hersteller und im Namen des Hersteller verantwortlich

Ing. Michaela Bartůňková  
Napajedla, 27.3.2019

*Bartůňková*

**Fatra, a.s.** 084  
třída Tomáše Bati 1541  
763 61 Napajedla

**fatra**

**WWW.FATRAFOL.CZ**

**WWW.FATRA.CZ**





## DECLARATIA DE PERFORMANȚĂ No. 5100806001

În conformitate cu Regulamentul PE 305/2011

|                                                         |                                                              |                                                                                                                          |            |            |                      |                        |
|---------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|------------|------------|----------------------|------------------------|
| 1.                                                      | Cod unic de indentificare a tipului de produs:               | FATRAFOL 810 - T1<br>5100806001                                                                                          |            |            |                      |                        |
| 2.                                                      | Identificarea produsului pentru constructii:                 | Hidroizolarea acoperișurilor                                                                                             |            |            |                      |                        |
| 3.                                                      | Fabricantul                                                  | Fatra, a.s., Třída Tomáše Bati 1541<br>763 61, Napajedla, Czech republic                                                 |            |            |                      |                        |
| 4.                                                      | Reprezentant autorizat:                                      | -                                                                                                                        |            |            |                      |                        |
| 5.                                                      | Sistemul de evaluare si verificare a constantei performantei | Systema 2 +                                                                                                              |            |            |                      |                        |
| 6a                                                      | Standard Armonizat<br>Organism notificat                     | EN 13956:2012<br>Centrum stavebního inženýrství, a.s.,<br>K Cihelně 304, 764 32 Zlín – Louky,<br>organism notificat 1390 |            |            |                      |                        |
| b                                                       | Document de evaluare european (EAD)                          | -                                                                                                                        |            |            |                      |                        |
|                                                         | Evaluare tehnică europeană (ETA)                             | -                                                                                                                        |            |            |                      |                        |
|                                                         | Organism de evaluare tehnică                                 | -                                                                                                                        |            |            |                      |                        |
|                                                         | Organism notificat                                           | -                                                                                                                        |            |            |                      |                        |
| 7.                                                      | Performanta declarata:                                       |                                                                                                                          |            |            |                      |                        |
| Caracteristici esentiale                                |                                                              | Performanta                                                                                                              |            |            |                      | Metoda de test         |
| Grosimea                                                |                                                              | 1,20<br>mm                                                                                                               | 1,50<br>mm | 1,80<br>mm | 2,00<br>mm           | EN 1849-2              |
| Performanța la foc exterior                             |                                                              | BROOF (t1)                                                                                                               |            |            |                      | EN 13501-5             |
| Reacție la foc                                          |                                                              | E                                                                                                                        |            |            |                      | EN 13501-1             |
| Etanșeitatea la apă 400 kPa                             |                                                              | Există                                                                                                                   |            |            |                      | EN 1928<br>Metodă B    |
| Forța maximă de tracțiune                               |                                                              | ≥ 1000/950<br>N/50 mm                                                                                                    |            |            |                      | EN 12311-2<br>Metodă A |
| Alungirea maximă de tracțiune                           |                                                              | ≥ 15/15 %                                                                                                                |            |            |                      | EN 12311-2<br>Metodă A |
| Rezistența la străpungerea rădăcinilor                  |                                                              | Există                                                                                                                   |            |            |                      | EN 13948<br>FLL Test   |
| Rezistența la sarcină statică                           |                                                              | Satisface 20 kg                                                                                                          |            |            |                      | EN 12730<br>Metodă B   |
| Rezistența la impact                                    | Există                                                       |                                                                                                                          |            |            | EN 12691<br>Metodă A |                        |
|                                                         | 1000<br>mm                                                   | 1250 mm                                                                                                                  |            |            |                      |                        |
|                                                         | Satisface 2000 mm                                            |                                                                                                                          |            |            | EN 12691<br>Metodă B |                        |
| Rezistentă la rupere                                    |                                                              | ≥ 180/180 N                                                                                                              |            |            |                      | EN 12310-2             |
| Rezistența la forfecare a îmbinării                     |                                                              | ≥ 900/850<br>N/50 mm                                                                                                     |            |            |                      | EN 12317-2             |
| Rezistența la smulgere a îmbinării                      |                                                              | ≥ 260/260<br>N/50 mm                                                                                                     |            |            |                      | EN 12316-2             |
| Flexibilitatea la temperaturi scăzute                   |                                                              | ≤ -25 °C                                                                                                                 |            |            |                      | EN 495-5               |
| Expunerea la radiațiile UV, temperatură ridicată și apă |                                                              | 5000 de ore, clasa 0                                                                                                     |            |            |                      | EN 1297                |

Performanța produsului identificat mai sus este în conformitate cu setul de performanțe declarate. Această declarație de performanță este emisă, în conformitate cu Regulamentul (UE) nr. 305/2011, sub responsabilitatea exclusivă a producătorului identificat mai sus.

Semnata pentru si in numele fabricantului:

Ing. Michaela Bartuňková  
Napajedla, 27.3.2019

Declarația este disponibilă pe site: <https://www.fatrafol.cz/wp-content/uploads/2019/12/DoP-Fatrafol-810-T1.pdf>  
Documentul este complet tradus de AGLICON S.R.L.





Vydání:  
Identifikační číslo:  
Verze č.:

01.07.2013  
026/13  
01

## PROHLÁŠENÍ O VLASTNOSTECH

**1. Identifikátor výrobku:**

netkaná geotextilie FATRATEX

**2. Typ, série nebo sériové číslo:**

**FATRATEX 200**

**3. Zamýšlené použití:**

funkce: filtrační a separační

**4. Jméno, firma nebo registrovaná obchodní známka:**

**UO TEX, s.r.o.**  
Sokolská 5, Kerhartice, 562 04 Ústí nad Orlicí  
IČ: 620 62 441. DIČ: CZ62062441  
www.uotex.cz / obchod@uotex.cz

**5. Zplnomocněný zástupce:**

Není relevantní

**6. Prohlášení o vlastnostech týkajících se stavebního výrobku, na který se vztahuje harmonizovaná norma:**

Systém 2+

**7. Notifikovaná osoba:**

Textilní zkušební ústav, s. p. - Václavská 6, 658 41, BRNO, Česká republika, identifikátor: Oznámený subjekt č. 1021  
provedl počáteční posouzení řízení výroby dle systému 2+ a vydal ES certifikát systému  
řízení výrob č. 1021-CPD-034/04 a provádí pravidelný dohled nad systémem řízení výroby

**8. Prohlášení o vlastnostech týkajících se stavebního výrobku, pro který bylo vydáno evropské technické posouzení:**

Není relevantní

**9. Základní charakteristiky:**

|                                                              |                                                           |
|--------------------------------------------------------------|-----------------------------------------------------------|
| <b>Pevnost v tahu</b> ( EN ISO 10319 ) :                     | MD 3,0 kN/m (-0,8 kN/m) / CMD 3,9 kN/m (-0,9 kN/m)        |
| <b>Tažnost</b> ( EN ISO 10319):                              | MD 36 % (±20 %) / CMD 42 % (±20 %)                        |
| <b>Odolnost proti dynamickému protržení</b> ( EN ISO 13433): | 26 mm ( + 5 mm)                                           |
| <b>Odolnost proti statickému protržení</b> ( EN ISO 12236 ): | 0,6 kN (-0,1 kN)                                          |
| <b>Charakteristická velikost otvorů</b> ( EN ISO 12956 ):    | 86 µm (±30 µm )                                           |
| <b>Propustnost kolmo k rovině vody</b> ( EN ISO 11058 ):     | 4,90. 10 <sup>-2</sup> m/s ( -0,9 . 10 <sup>-2</sup> m/s) |

EN 13249:2000 + A1:2005, EN 13250:2000 + A1:2005, EN 13251:2000 + A1:2005,  
EN 13252:2000 + A1:2005, EN 13253:2000 + A1:2005, EN 13254:2000 + A1:2005,  
EN 13255:2000 + A1:2005, EN 13257:2000 + A1:2005, EN 13265:2000 + A1:2005  
**Odolnost:** zakrýt v den uložení  
předpokládá se, že bude odolná po dobu minimálně pěti let pro uplatnění, které neslouží k vyztužování  
přírodních zemín s 4 < pH < 9 a teplotami zeminy < 25 °C

**10. Prohlášení:**

Vlastnost výrobku uvedená v bodě 1 a 2 je ve shodě s vlastností uvedenou v bodě 9.  
Toto prohlášení o vlastnostech se vydává na výhradní odpovědnost výrobce uvedeného v bodě 4.

V Ústí nad Orlicí  
Dne: 1.7.2013

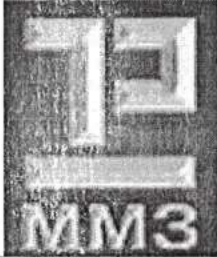
Ing. Martin Mejdr  
Jednatel společnosti

**UO TEX, s.r.o.**

Sokolská 5, Kerhartice, 562 04 Ústí nad Orlicí | tel.: +420 465 52 10 49, Fax: +420 465 52 60 71  
e-mail: obchod@uotex.cz, www.uotex.cz | IČO: 62062441, DIČ: CZ62062441  
Společnost UO TEX, s. r. o. je zapsána v OR Hradec Králové v oddíle C, vložce 7363



Tradiční český výrobce netkaných textilií  
założeno 1905

|                                                                                                                                                                                                           |                                                                                          |                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| <b>Contract №:</b> 428<br><b>Data:</b> 02.12.2020<br><b>Specificatie:</b> 51<br><b>Ordin:</b> 3042805101                                                                                                  |          | <b>Mijloc de transport</b><br><b>Numar de vehicul:</b> BPM516/T592CD |
| <b>Produsator:</b><br>JOINT STOCK COMPANY "MOLDOVA STEEL WORKS"<br>1 Industrialnaya str., Rybnitsa, Moldova<br><b>Tara de origine:</b> Republica Moldova<br><b>Nomenclatorul marfurilor:</b><br>721420000 | <b>Cumparator:</b><br>BPM-TRADE SRL<br><b>Tara de destinatie:</b><br>MOLDOVA REPUBLIC OF |                                                                      |

### CERTIFICAT DE INSPECTIE NO 52791

This certificate complies with requirements of EN 10204. Type 3.1

| Forma de livrare: Bare                          |            |             |               |               |                | Standard           |              |
|-------------------------------------------------|------------|-------------|---------------|---------------|----------------|--------------------|--------------|
| Descrierea bunurilor: ARMATURA LAMINATA LA CALD |            |             |               |               |                | ET 01/01-046:2020; |              |
| №                                               | Nr. sarjei | Nr. lotului | Marca de otel | Dimensiune mm | Lungime mm     | Numar de legaturi  | Greutatea MT |
| 1                                               | 22301873   |             | B500B         | 8             | 12000 (+/-100) | 9                  | 23.412       |
|                                                 |            |             |               |               |                | 9                  | 23.412       |

| Compozitie Chimica - % |        |         |         |         |         |        |
|------------------------|--------|---------|---------|---------|---------|--------|
| №                      | C x100 | P x1000 | S x1000 | Cu x100 | N x1000 | Ceq x1 |
| 1                      | 20     | 19      | 8       | 33      | 7       | .328   |

| Proprietati mecanice |                                              |                                 |                                          |                           |                  |                                    |                          |                    |
|----------------------|----------------------------------------------|---------------------------------|------------------------------------------|---------------------------|------------------|------------------------------------|--------------------------|--------------------|
| №                    | Rezistenta la rupere la tractiune, Rm, N/mm2 | Limita de curgere, Rp0.2, N/mm2 | Alungirea totala la forta maxima, Agt, % | Masa pe metru linar, kg/m | Raport Rm/Rp0.2, | Suprafata relativa a nervurii, Fr, | Alungirea la rupere, An, | Indoire/ dezdoire, |
| 1                    | 684                                          | 589                             | 10.0                                     | 0.405                     | 1.16             | 0.069                              | 24.0                     | buna               |

Materialul a fost testat radiologic si nu emite radiatii periculoase

**Nota** Producatorul "JSC MOLDOVA STEEL WORKS" garanteaza ca in ciclul de productie a produselor metalurgice specificate in documentele de insotire, nu s-au folosit partial sau integral semifabricate, materii prime, fier vechi sau alte materiale feroase, origine din Federatia Rusa.  
 Producatorul confirma ca in ciclul de productie a produselor metalurgice, specificate in documentele de insotire, au fost utilizate resturi de metale feroase provenite din Republica Moldova si Romania.



|          |                                                                                                                                                                                  |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Marcarea |  <b>Semnatura:</b> controller departament de control tehnic<br>Bordiian N. V.<br>30.09.2023 |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



|                                                                                                                                                                                                         |                                                                                          |                                                                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| <b>Contract №:</b> 428<br><b>Data:</b> 02.12.2020<br><b>Specificatie:</b> 52<br><b>Ordin:</b> 3042805201                                                                                                |          | <b>Mijloc de transport</b><br><b>Numar de vehicul:</b> BPM506/S259HS |
| <b>Produtor:</b><br>JOINT STOCK COMPANY "MOLDOVA STEEL WORKS"<br>1 Industrialnaya str., Rybnitsa, Moldova<br><b>Tara de origine:</b> Republica Moldova<br><b>Nomenclatorul marfurilor:</b><br>721420000 | <b>Cumparator:</b><br>BPM-TRADE SRL<br><b>Tara de destinatie:</b><br>MOLDOVA REPUBLIC OF |                                                                      |

### CERTIFICAT DE INSPECTIE NO 53207

This certificate complies with requirements of EN 10204. Type 3.1

| <b>Forma de livrare:</b> Bare                          |            |             |               |               |                | <b>Standard</b>    |              |
|--------------------------------------------------------|------------|-------------|---------------|---------------|----------------|--------------------|--------------|
| <b>Descrierea bunurilor:</b> ARMATURA LAMINATA LA CALD |            |             |               |               |                | ET 01/01-046:2020; |              |
| No                                                     | Nr. sarjei | Nr. lotului | Marca de otel | Dimensiune mm | Lungime mm     | Numar de legaturi  | Greutatea MT |
| 1                                                      | 22301920   |             | B500B         | 10            | 12000 (+/-100) | 10                 | 23.244       |
|                                                        |            |             |               |               |                | 10                 | 23.244       |

| Compozitie Chimica - % |        |         |         |         |         |        |
|------------------------|--------|---------|---------|---------|---------|--------|
| No                     | C x100 | P x1000 | S x1000 | Cu x100 | N x1000 | Ceq x1 |
| 1                      | 19     | 18      | 8       | 32      | 9       | .317   |

| Proprietati mecanice |                                              |                                 |                                          |                           |                  |                                    |                          |                    |
|----------------------|----------------------------------------------|---------------------------------|------------------------------------------|---------------------------|------------------|------------------------------------|--------------------------|--------------------|
| No                   | Rezistenta la rupere la tractiune, Rm, N/mm2 | Limita de curgere, Rp0.2, N/mm2 | Alungirea totala la forta maxima, Agt, % | Masa pe metru linar, kg/m | Raport Rm/Rp0.2, | Suprafata relativa a nervurii, Fr, | Alungirea la rupere, An, | Indoire/ dezdoire, |
| 1                    | 674                                          | 577                             | 10.0                                     | 0.634                     | 1.17             | 0.078                              | 24.0                     | buna               |

#### Materialul a fost testat radiologic si nu emite radiatii periculoase

**Nota** Producatorul "JSC MOLDOVA STEEL WORKS" garanteaza ca in ciclul de productie a produselor metalurgice specificate in documentele de insotire, nu s-au folosit partial sau integral semifabricate, materii prime, fier vechi sau alte materiale feroase, origine din Federatia Rusa.

Producatorul confirma ca in ciclul de productie a produselor metalurgice, specificate in documentele de insotire, au fost utilizate resturi de metale feroase provenite din Republica Moldova si Romania.



|                 |                                                                                                                                                                                |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Marcarea</b> |  <b>Semnatura:</b> controller departament de control tehnic<br>Kozak O. Iu.<br>01.11.2023 |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                              |                                                                                          |                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| <b>Contract №:</b> 428<br><b>Data:</b> 02.12.2020<br><b>Specificatie:</b> 50<br><b>Ordin:</b> 3042805001                                                     |          | <b>Mijloc de transport</b><br><b>Numar de vehicul:</b> BPM569/O151EE |
| <b>Prodicator:</b><br>JOINT STOCK COMPANY "MOLDOVA STEEL WORKS"<br>1 Industrialnaya str., Rybnitsa, Moldova<br><b>Nomenclatorul marfurilor:</b><br>721420000 | <b>Cumparator:</b><br>BPM-TRADE SRL<br><b>Tara de destinatie:</b><br>MOLDOVA REPUBLIC OF |                                                                      |

## CERTIFICAT DE INSPECTIE NO 52131

This certificate complies with requirements of EN 10204. Type 3.1

| Forma de livrare: Bare                          |            |             |               |               |                | Standard           |              |
|-------------------------------------------------|------------|-------------|---------------|---------------|----------------|--------------------|--------------|
| Descrierea bunurilor: ARMATURA LAMINATA LA CALD |            |             |               |               |                | ET 01/01-046:2020; |              |
| №                                               | Nr. sarjei | Nr. lotului | Marca de otel | Dimensiune mm | Lungime mm     | Numar de legaturi  | Greutatea MT |
| 1                                               | 22301372   |             | B500B         | 12            | 12000 (+/-100) | 7                  | 16.694       |
| 2                                               | 22301447   |             | B500B         | 12            | 12000 (+/-100) | 2                  | 4.446        |
|                                                 |            |             |               |               |                | 9                  | 21.140       |

| Compozitie Chimica - % |        |         |         |         |         |        |
|------------------------|--------|---------|---------|---------|---------|--------|
| №                      | C x100 | P x1000 | S x1000 | Cu x100 | N x1000 | Ceq x1 |
| 1                      | 21     | 23      | 11      | 37      | 8       | .405   |
| 2                      | 21     | 31      | 5       | 38      | 8       | .411   |

| Proprietati mecanice |                                              |                                 |                                          |                            |                  |                                    |                          |                    |
|----------------------|----------------------------------------------|---------------------------------|------------------------------------------|----------------------------|------------------|------------------------------------|--------------------------|--------------------|
| №                    | Rezistenta la rupere la tractiune, Rm, N/mm2 | Limita de curgere, Rp0.2, N/mm2 | Alungirea totala la forta maxima, Agt, % | Masa pe metru liniar, kg/m | Raport Rm/Rp0.2, | Suprafata relativa a nervurii, Fr, | Alungirea la rupere, An, | Indoire/ dezdoire, |
| 1                    | 684                                          | 583                             | 11.5                                     | 0.886                      | 1.17             | 0.079                              | 24.0                     | buna               |
| 2                    | 697                                          | 589                             | 10.5                                     | 0.886                      | 1.18             | 0.068                              | 25.0                     | buna               |

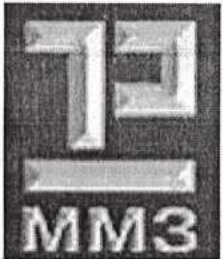
Materialul a fost testat radiologic si nu emite radiatii periculoase

Nota



|          |                                                                                                                                                                                    |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Marcarea | <br>Semnatura: controller<br>departament de control tehnic<br>Terletckaia E. P.<br>09.08.2023 |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| <b>Contract №:</b> 428<br><b>Data:</b> 02.12.2020<br><b>Specificatie:</b> 53<br><b>Ordin:</b> 3042805301                                                                                                |          | <b>Mijloc de transport</b><br><b>Numar de vehicul:</b> BPM558/X362XC |
| <b>Produtor:</b><br>JOINT STOCK COMPANY "MOLDOVA STEEL WORKS"<br>1 Industrialnaya str., Rybnitsa, Moldova<br><b>Tara de origine:</b> Republica Moldova<br><b>Nomenclatorul marfurilor:</b><br>721420000 | <b>Cumparator:</b><br>BPM-TRADE SRL<br><b>Tara de destinatie:</b><br>MOLDOVA REPUBLIC OF |                                                                      |

## CERTIFICAT DE INSPECTIE NO 53291

This certificate complies with requirements of EN 10204. Type 3.1

| <b>Forma de livrare:</b> Bare                          |            |             |               |               |                |                                       |               |
|--------------------------------------------------------|------------|-------------|---------------|---------------|----------------|---------------------------------------|---------------|
| <b>Descrierea bunurilor:</b> ARMATURA LAMINATA LA CALD |            |             |               |               |                | <b>Standard</b><br>ET 01/01-046:2020; |               |
| No                                                     | Nr. sarjei | Nr. lotului | Marca de otel | Dimensiune mm | Lungime mm     | Numar de legaturi                     | Greutatea MT  |
| 1                                                      | 22302196   |             | B500B         | 14            | 12000 (+/-100) | 4                                     | 10.562        |
| 2                                                      | 22302198   |             | B500B         | 14            | 12000 (+/-100) | 5                                     | 12.818        |
|                                                        |            |             |               |               |                | <b>9</b>                              | <b>23.380</b> |

| Compozitie Chimica - % |           |            |            |            |            |           |
|------------------------|-----------|------------|------------|------------|------------|-----------|
| No                     | C<br>x100 | P<br>x1000 | S<br>x1000 | Cu<br>x100 | N<br>x1000 | Ceq<br>x1 |
| 1                      | 19        | 23         | 9          | 45         | 9          | .331      |
| 2                      | 20        | 20         | 8          | 42         | 8          | .34       |

| Proprietati mecanice |                                              |                                 |                                          |                           |                  |                                    |                          |                     |
|----------------------|----------------------------------------------|---------------------------------|------------------------------------------|---------------------------|------------------|------------------------------------|--------------------------|---------------------|
| No                   | Rezistenta la rupere la tractiune, Rm, N/mm2 | Limita de curgere, Rp0.2, N/mm2 | Alungirea totala la forta maxima, Agt, % | Masa pe metru linar, kg/m | Raport Rm/Rp0.2, | Suprafata relativa a nervurii, Fr, | Alungirea la rupere, An, | Indoire/ dezdolire, |
| 1                    | 693                                          | 591                             | 9.0                                      | 1.221                     | 1.17             | 0.093                              | 21.5                     | buna                |
| 2                    | 694                                          | 591                             | 10.5                                     | 1.214                     | 1.17             | 0.090                              | 18.5                     | buna                |

**Materialul a fost testat radiologic si nu emite radiatii periculoase**

**Nota** Producatorul "JSC MOLDOVA STEEL WORKS" garanteaza ca in ciclul de productie a produselor metalurgice specificate in documentele de insotire, nu s-au folosit partial sau integral semifabricate, materii prime, fier vechi sau alte materiale feroase, **origine din Federatia Rusa.**  
 Producatorul confirma ca in ciclul de productie a produselor metalurgice, specificate in documentele de insotire, au fost utilizate resturi de metale feroase provenite din Republica Moldova si Romania.



|                 |                                                                                              |
|-----------------|----------------------------------------------------------------------------------------------|
| <b>Marcarea</b> | <b>Semnatura:</b> controller<br>departament de control tehnic<br>Gurulia M. A.<br>09.11.2023 |
|-----------------|----------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                           |                                                                                          |                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| <b>Contract №:</b> 428<br><b>Data:</b> 02.12.2020<br><b>Specificatie:</b> 53<br><b>Ordin:</b> 3042805301                                                                                                  |          | <b>Mijloc de transport</b><br><b>Numar de vehicul:</b> BPM506/S259HS |
| <b>Producator:</b><br>JOINT STOCK COMPANY "MOLDOVA STEEL WORKS"<br>1 Industrialnaya str., Rybnitsa, Moldova<br><b>Tara de origine:</b> Republica Moldova<br><b>Nomenclatorul marfurilor:</b><br>721420000 | <b>Cumparator:</b><br>BPM-TRADE SRL<br><b>Tara de destinatie:</b><br>MOLDOVA REPUBLIC OF |                                                                      |

## CERTIFICAT DE INSPECTIE NO 53242

This certificate complies with requirements of EN 10204. Type 3.1

| Forma de livrare: Bare                          |            |             |               |               |                | Standard           |              |
|-------------------------------------------------|------------|-------------|---------------|---------------|----------------|--------------------|--------------|
| Descrierea bunurilor: ARMATURA LAMINATA LA CALD |            |             |               |               |                | ET 01/01-046:2020; |              |
| Nr                                              | Nr. sarjei | Nr. lotului | Marca de otel | Dimensiune mm | Lungime mm     | Numar de legaturi  | Greutatea MT |
| 1                                               | 22302167   |             | B500B         | 16            | 12000 (+/-100) | 9                  | 23.522       |
|                                                 |            |             |               |               |                | 9                  | 23.522       |

| Compozitie Chimica - % |        |         |         |         |         |        |
|------------------------|--------|---------|---------|---------|---------|--------|
| Nr                     | C x100 | P x1000 | S x1000 | Cu x100 | N x1000 | Ceq x1 |
| 1                      | 19     | 18      | 8       | 43      | 9       | .324   |

| Proprietati mecanice |                                              |                                 |                                          |                            |                  |                                    |                          |
|----------------------|----------------------------------------------|---------------------------------|------------------------------------------|----------------------------|------------------|------------------------------------|--------------------------|
| Nr                   | Rezistenta la rupere la tractiune, Rm, N/mm2 | Limita de curgere, Rp0.2, N/mm2 | Alungirea totala la forta maxima, Agt, % | Masa pe metru liniar, kg/m | Raport Rm/Rp0.2, | Suprafata relativa a nervurii, Fr, | Alungirea la rupere, An, |
| 1                    | 674                                          | 574                             | 10.5                                     | 1.581                      | 1.18             | 0.083                              | 20.0                     |
|                      |                                              |                                 |                                          |                            |                  |                                    | buna                     |

Materialul a fost testat radiologic si nu emite radiatii periculoase

**Nota** Producatorul "JSC MOLDOVA STEEL WORKS" garanteaza ca in ciclul de productie a produselor metalurgice specificate in documentele de insotire, nu s-au folosit partial sau integral semifabricate, materii prime, fier vechi sau alte materiale feroase, origine din Federatia Rusa.  
 Producatorul confirma ca in ciclul de productie a produselor metalurgice, specificate in documentele de insotire, au fost utilizate resturi de metale feroase provenite din Republica Moldova si Romania.

|          |                                                                                                                                                                                                                                                                      |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Marcarea | <br><br>Semnatura: controller departament de control tehnic<br>Chuprun N. S.<br>05.11.2023 |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| <b>Contract №:</b> 428<br><b>Data:</b> 02.12.2020<br><b>Specificatie:</b> 53<br><b>Ordin:</b> 3042805301                                                                                                |         | <b>Mijloc de transport</b><br><b>Numar de vehicul:</b> BPM573/S266HS |
| <b>Produtor:</b><br>JOINT STOCK COMPANY "MOLDOVA STEEL WORKS"<br>1 Industrialnaya str., Rybnitsa, Moldova<br><b>Tara de origine:</b> Republica Moldova<br><b>Nomenclatorul marfurilor:</b><br>721420000 | <b>Cumparator:</b><br>BPM-TRADE SRL<br><b>Tara de destinatie:</b><br>MOLDOVA REPUBLIC OF |                                                                      |

### CERTIFICAT DE INSPECTIE NO 53290

This certificate complies with requirements of EN 10204. Type 3.1

| Forma de livrare: Bare                          |            |             |               |               |                | Standard           |              |
|-------------------------------------------------|------------|-------------|---------------|---------------|----------------|--------------------|--------------|
| Descrierea bunurilor: ARMATURA LAMINATA LA CALD |            |             |               |               |                | ET 01/01-043:2020; |              |
| Nr                                              | Nr. sarjei | Nr. lotului | Marca de otel | Dimensiune mm | Lungime mm     | Numar de legaturi  | Greutatea MT |
| 1                                               | 22302203   |             | B500B         | 18            | 12000 (+/-100) | 8                  | 21.188       |
|                                                 |            |             |               |               |                | 8                  | 21.188       |

| Compozitie Chimica - % |        |         |         |         |         |        |
|------------------------|--------|---------|---------|---------|---------|--------|
| Nr                     | C x100 | P x1000 | S x1000 | Cu x100 | N x1000 | Ceq x1 |
| 1                      | 21     | 21      | 10      | 40      | 9       | .396   |

| Proprietati mecanice |                                              |                                 |                                          |                           |                  |                                    |                          |                   |
|----------------------|----------------------------------------------|---------------------------------|------------------------------------------|---------------------------|------------------|------------------------------------|--------------------------|-------------------|
| Nr                   | Rezistenta la rupere la tractiune, Rm, N/mm2 | Limita de curgere, Rp0.2, N/mm2 | Alungirea totala la forta maxima, Agt, % | Masa pe metru linar, kg/m | Raport Rm/Rp0.2, | Suprafata relativa a nervurii, Fr, | Alungirea la rupere, An, | Indoire, dezoire, |
| 1                    | 677                                          | 578                             | 9.5                                      | 1.995                     | 1.17             | 0.085                              | 20.5                     | buna              |

Materialul a fost testat radiologic si nu emite radiatii periculoase

**Nota** Producatorul "JSC MOLDOVA STEEL WORKS" garanteaza ca in ciclul de productie a produselor metalurgice specificate in documentele de insotire, nu s-au folosit partial sau integral semifabricate, materii prime, fier vechi sau alte materiale feroase, origine din Federatia Rusa.  
 Producatorul confirma ca in ciclul de productie a produselor metalurgice, specificate in documentele de insotire, au fost utilizate resturi de metale feroase provenite din Republica Moldova si Romania.



|                 |                                                                                                                                                                                 |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Marcarea</b> |  <b>Semnatura:</b> controller departament de control tehnic<br>Gurulia M. A.<br>09.11.2023 |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                           |                                                                                          |                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| <b>Contract №:</b> 428<br><b>Data:</b> 02.12.2020<br><b>Specificatie:</b> 51<br><b>Ordin:</b> 3042805101                                                                                                  |          | <b>Mijloc de transport</b><br><b>Numar de vehicul:</b> BPM533/S311SJ |
| <b>Prodicator:</b><br>JOINT STOCK COMPANY "MOLDOVA STEEL WORKS"<br>1 Industrialnaya str., Rybnitsa, Moldova<br><b>Tara de origine:</b> Republica Moldova<br><b>Nomenclatorul marfurilor:</b><br>721420000 | <b>Cumparator:</b><br>BPM-TRADE SRL<br><b>Tara de destinatie:</b><br>MOLDOVA REPUBLIC OF |                                                                      |

### CERTIFICAT DE INSPECTIE NO 52809

This certificate complies with requirements of EN 10204. Type 3.1

| Forma de livrare: Bare                          |            |             |               |               |                | Standard           |              |
|-------------------------------------------------|------------|-------------|---------------|---------------|----------------|--------------------|--------------|
| Descrierea bunurilor: ARMATURA LAMINATA LA CALD |            |             |               |               |                | ET 01/01-046:2020; |              |
| No                                              | Nr. sarjei | Nr. lotului | Marca de otel | Dimensiune mm | Lungime mm     | Numar de legaturi  | Greutatea MT |
| 1                                               | 22301820   |             | B500B         | 25            | 12000 (+/-100) | 4                  | 7.610        |
| 2                                               | 22301867   |             | B500B         | 20            | 12000 (+/-100) | 6                  | 14.466       |
|                                                 |            |             |               |               |                | 10                 | 22.076       |

| Compozitie Chimica - % |        |         |         |         |         |        |
|------------------------|--------|---------|---------|---------|---------|--------|
| No                     | C x100 | P x1000 | S x1000 | Cu x100 | N x1000 | Ceq x1 |
| 1                      | 21     | 18      | 11      | 31      | 9       | .39    |
| 2                      | 21     | 22      | 8       | 34      | 8       | .392   |

| Proprietati mecanice |                                              |                                 |                                          |                           |                  |                                    |                          |                    |
|----------------------|----------------------------------------------|---------------------------------|------------------------------------------|---------------------------|------------------|------------------------------------|--------------------------|--------------------|
| No                   | Rezistenta la rupere la tractiune, Rm, N/mm2 | Limita de curgere, Rp0.2, N/mm2 | Alungirea totala la forta maxima, Agt, % | Masa pe metru linar, kg/m | Raport Rm/Rp0.2, | Suprafata relativa a nervurii, Fr, | Alungirea la rupere, An, | Indoire/ dezdoire, |
| 1                    | 681                                          | 560                             | 11.5                                     | 3.877                     | 1.22             | 0.089                              | 19.0                     | buna               |
| 2                    | 667                                          | 555                             | 12.0                                     | 2.468                     | 1.20             | 0.090                              | 20.5                     | buna               |

Materialul a fost testat radiologic si nu emite radiatii periculoase

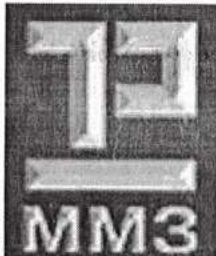
**Nota** Prodicatorul "JSC MOLDOVA STEEL WORKS" garanteaza ca in ciclul de productie a produselor metalurgice specificate in documentele de insotire, nu s-au folosit partial sau integral semifabricate, materii prime, fier vechi sau alte materiale feroase, origine din Federatia Rusa.  
 Prodicatorul confirma ca in ciclul de productie a produselor metalurgice, specificate in documentele de insotire, au fost utilizate resturile de metale feroase provenite din Republica Moldova si Romania.



|          |                                                                                       |                                                                                         |
|----------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Marcarea |  | Semnatura: controller<br>departament de control tehnic<br>Lastoviak A. N.<br>02.10.2023 |
|----------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|



Contract №: 428  
Data: 02.12.2020  
Specificatie: 51  
Ordin: 3042805101



Mijloc de transport  
Numar  
de vehicul: BPM541/S254HS

Prodicator:  
JOINT STOCK COMPANY "MOLDOVA STEEL WORKS"  
1 Industrialnaya str., Rybnitsa, Moldova  
Tara de origine: Republica Moldova  
Nomenclatorul marfurilor:  
721499100

Cumparator:  
BPM-TRADE SRL  
Tara de destinatie:  
MOLDOVA REPUBLIC OF

## CERTIFICAT DE INSPECTIE NO 52794

This certificate complies with requirements of EN 10204. Type 3.1

| Forma de livrare: Bare                          |            |             |               |               |                | Standard           |              |
|-------------------------------------------------|------------|-------------|---------------|---------------|----------------|--------------------|--------------|
| Descrierea bunurilor: Armatura laminata rotunda |            |             |               |               |                | ET 01/01-047:2020; |              |
| Nr                                              | Nr. sarjei | Nr. lotului | Marca de otel | Dimensiune mm | Lungime mm     | Numar de legaturi  | Greutatea MT |
| 1                                               | 22301718   |             | A240C         | 8             | 12000 (+/-100) | 9                  | 23.034       |
|                                                 |            |             |               |               |                | 9                  | 23.034       |

| Compozitie Chimica - % |        |         |         |         |         |        |
|------------------------|--------|---------|---------|---------|---------|--------|
| Nr                     | C x100 | Si x100 | P x1000 | S x1000 | N x1000 | Ceq x1 |
| 1                      | 20     | 14      | 25      | 11      | 8       | .349   |

| Proprietati mecanice |                                              |                                 |                            |                            |                  |                  |
|----------------------|----------------------------------------------|---------------------------------|----------------------------|----------------------------|------------------|------------------|
| Nr                   | Rezistenta la rupere la tractiune, Rm, N/mm2 | Limita de curgere, Rp0.2, N/mm2 | Alungirea la rupere, A5, % | Masa pe metru liniar, kg/m | Raport Rm/Rp0.2, | Indoire la rece, |
| 1                    | 542                                          | 381                             | 34.5                       | 0.394                      | 1.42             | buna             |

Materialul a fost testat radiologic si nu emite radiatii periculoase

Nota Producatorul "JSC MOLDOVA STEEL WORKS" garanteaza ca in ciclul de productie a produselor metalurgice specificate in documentele de insotire, nu s-au folosit partial sau integral semifabricate, materii prime, fier vechi sau alte materiale feroase, originare din Federatia Rusa.  
Producatorul confirma ca in ciclul de productie a produselor metalurgice, specificate in documentele de insotire, au fost utilizate resturi de metale feroase provenite din Republica Moldova si Romania.



Marcarea



Semnatura: controller  
departament de control tehnic  
Zaidova A. I.  
30.09.2023

Contract №: 428  
Data: 02.12.2020  
Specificatie: 50  
Ordin: 3042805001



Mijloc de transport  
Numar  
de vehicul: BPM572/S265HS

Produsator:  
JOINT STOCK COMPANY "MOLDOVA STEEL WORKS"  
1 Industrialnaya str., Rybnitsa, Moldova

Nomenclatorul marfurilor:  
721499100

Cumparator:  
BPM-TRADE SRL

Tara de destinatie:  
MOLDOVA REPUBLIC OF

## CERTIFICAT DE INSPECTIE NO 52350

This certificate complies with requirements of EN 10204. Type 3.1

| Forma de livrare: Bare                          |            |             |               |               |                | Standard           |              |
|-------------------------------------------------|------------|-------------|---------------|---------------|----------------|--------------------|--------------|
| Descrierea bunurilor: Armatura laminata rotunda |            |             |               |               |                | ET 01/01-047:2020; |              |
| No                                              | Nr. sarjei | Nr. lotului | Marca de otel | Dimensiune mm | Lungime mm     | Numar de legaturi  | Greutatea MT |
| 1                                               | 22300835   |             | A240C         | 10            | 12000 (+/-100) | 4                  | 10.672       |
| 2                                               | 22301378   |             | A240C         | 10            | 12000 (+/-100) | 4                  | 10.648       |
|                                                 |            |             |               |               |                | 8                  | 21.320       |

| Compozitie Chimica - % |        |         |         |         |         |        |
|------------------------|--------|---------|---------|---------|---------|--------|
| No                     | C x100 | Si x100 | P x1000 | S x1000 | N x1000 | Ceq x1 |
| 1                      | 15     | 17      | 12      | 3       | 5       | .34    |
| 2                      | 8      | 9       | 12      | 6       | 9       | .202   |

| Proprietati mecanice |                                              |                                 |                            |                           |                  |                  |
|----------------------|----------------------------------------------|---------------------------------|----------------------------|---------------------------|------------------|------------------|
| No                   | Rezistenta la rupere la tractiune, Rm, N/mm2 | Limita de curgere, Rp0.2, N/mm2 | Alungirea la rupere, A5, % | Masa pe metru linar, kg/m | Raport Rm/Rp0.2, | Indoire la rece, |
| 1                    | 458                                          | 310                             | 39.0                       | 0.621                     | 1.48             | buna             |
| 2                    | 409                                          | 294                             | 39.0                       | 0.615                     | 1.39             | buna             |

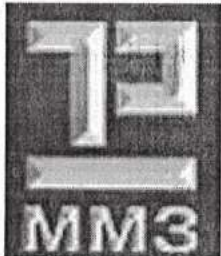
Materialul a fost testat radiologic si nu emite radiatii periculoase

Nota



|          |                                                                                           |
|----------|-------------------------------------------------------------------------------------------|
| Marcarea | <br>Semnatura: controller<br>departament de control tehnic<br>Gurulia M. A.<br>25.08.2023 |
|----------|-------------------------------------------------------------------------------------------|

Contract №: 428  
Data: 02.12.2020  
Specificatie: 50  
Ordin: 3042805001



Mijloc de transport  
Numar  
de vehicul: BPM539/S191SJ

Produtor:  
JOINT STOCK COMPANY "MOLDOVA STEEL WORKS"  
1 Industrialnaya str., Rybnitsa, Moldova  
Nomenclatorul marfurilor:  
721499100

Cumparator:  
BPM-TRADE SRL  
Tara de destinatie:  
MOLDOVA REPUBLIC OF

### CERTIFICAT DE INSPECTIE NO 52428

This certificate complies with requirements of EN 10204. Type 3.1

| Forma de livrare: Bare                          |            |             |               |               |                | Standard           |              |
|-------------------------------------------------|------------|-------------|---------------|---------------|----------------|--------------------|--------------|
| Descrierea bunurilor: Armatura laminata rotunda |            |             |               |               |                | ET 01/01-047:2020; |              |
| Nr.                                             | Nr. sarjei | Nr. lotului | Marca de otel | Dimensiune mm | Lungime mm     | Numar de legaturi  | Greutatea MT |
| 1                                               | 22201366   |             | A240C         | 12            | 12000 (+/-100) | 1                  | 2.640        |
|                                                 |            |             |               |               |                | 1                  | 2.640        |

| Compozitie Chimica - % |        |         |         |         |         |        |
|------------------------|--------|---------|---------|---------|---------|--------|
| Nr.                    | C x100 | Si x100 | P x1000 | S x1000 | N x1000 | Ceq x1 |
| 1                      | 5      | 7       | 20      | 6       | 8       | .154   |

| Proprietati mecanice |                                              |                                 |                            |                            |                  |                  |
|----------------------|----------------------------------------------|---------------------------------|----------------------------|----------------------------|------------------|------------------|
| Nr.                  | Rezistenta la rupere la tractiune, Rm, N/mm2 | Limita de curgere, Rp0.2, N/mm2 | Alungirea la rupere, A5, % | Masa pe metru linlar, kg/m | Raport Rm/Rp0.2, | Indoire la rece, |
| 1                    | 393                                          | 290                             | 42.0                       | 0.873                      | 1.35             | buna             |

Materialul a fost testat radiologic si nu emite radiatii periculoase  
Nota

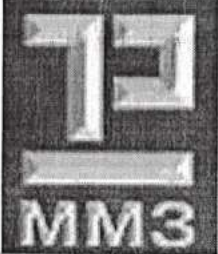


Marcarea



Semnatura: controller  
departament de control tehnic  
Novoselova N. lu.  
30.08.2023



|                                                                                                                                                                  |                                                                                              |                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| <b>Contract №:</b> 428<br><b>Data:</b> 02.12.2020<br><b>Specificatie:</b> 49<br><b>Ordin:</b> 3042804901                                                         |              | <b>Mijloc de transport</b><br><b>Numar de vehicul:</b> BPM556/S835HS |
| <b>Producator:</b><br>JOINT STOCK COMPANY "MOLDOVA STEEL WORKS"<br>1 Industrialnaya str., Rybnitsa, Moldova<br><br><b>Nomenclatorul marfurilor:</b><br>721499100 | <b>Cumparator:</b><br>BPM-TRADE SRL<br><br><b>Tara de destinatie:</b><br>MOLDOVA REPUBLIC OF |                                                                      |

### CERTIFICAT DE INSPECTIE NO 52057

This certificate complies with requirements of EN 10204. Type 3.1

| <b>Forma de livrare:</b> Bare                          |            |             |               |               |                | <b>Standard</b>    |              |
|--------------------------------------------------------|------------|-------------|---------------|---------------|----------------|--------------------|--------------|
| <b>Descrierea bunurilor:</b> Armatura laminata rotunda |            |             |               |               |                | ET 01/01-047:2020; |              |
| №                                                      | Nr. sarjei | Nr. lotului | Marca de otel | Dimensiune mm | Lungime mm     | Numar de legaturi  | Greutatea MT |
| 1                                                      | 22300441   |             | A240C         | 10            | 12000 (+/-100) | 1                  | 2.644        |
| 2                                                      | 22300663   |             | A240C         | 10            | 12000 (+/-100) | 1                  | .630         |
| 3                                                      | 22301038   |             | A240C         | 14            | 12000 (+/-100) | 2                  | 3.586        |

| Compozitie Chimica - % |        |         |         |         |         |        |
|------------------------|--------|---------|---------|---------|---------|--------|
| №                      | C x100 | Si x100 | P x1000 | S x1000 | N x1000 | Ceq x1 |
| 1                      | 4      | 8       | 14      | 7       | 9       | .163   |
| 2                      | 8      | 9       | 14      | 10      | 7       | .192   |
| 3                      | 20     | 15      | 26      | 7       | 9       | .338   |

| Proprietati mecanice |                                              |                                 |                            |                           |                  |                  |
|----------------------|----------------------------------------------|---------------------------------|----------------------------|---------------------------|------------------|------------------|
| №                    | Rezistenta la rupere la tractiune, Rm, N/mm2 | Limita de curgere, Rp0.2, N/mm2 | Alungirea la rupere, A5, % | Masa pe metru linar, kg/m | Raport Rm/Rp0.2, | Indoire la rece, |
| 1                    | 403                                          | 307                             | 43.0                       | 0.621                     | 1.31             | buna             |
| 2                    | 423                                          | 319                             | 40.5                       | 0.609                     | 1.32             | buna             |
| 3                    | 528                                          | 376                             | 34.0                       | 1.210                     | 1.40             | buna             |

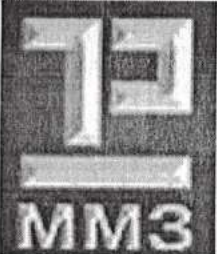
Materialul a fost testat radiologic si nu emite radiatii periculoase

Nota



|                 |                                                                         |
|-----------------|-------------------------------------------------------------------------|
| <b>Marcarea</b> | Semnatura: controller<br>departament de control tehnic<br>Chuprun N. S. |
|                 | 01.08.2023                                                              |



|                                                                                                                                                              |                                                                                          |                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| <b>Contract №:</b> 428<br><b>Data:</b> 02.12.2020<br><b>Specificatie:</b> 46<br><b>Ordin:</b> 3042804601                                                     |          | <b>Mijloc de transport</b><br><b>Numar de vehicul:</b> BPM518/O159EE |
| <b>Prodicator:</b><br>JOINT STOCK COMPANY "MOLDOVA STEEL WORKS"<br>1 Industrialnaya str., Rybnitsa, Moldova<br><b>Nomenclatorul marfurilor:</b><br>721499100 | <b>Cumparator:</b><br>BPM-TRADE SRL<br><b>Tara de destinatie:</b><br>MOLDOVA REPUBLIC OF |                                                                      |

### CERTIFICAT DE INSPECTIE NO 51268

This certificate complies with requirements of EN 10204. Type 3.1

| Forma de livrare: Bare                          |            |             |               |               |                | Standard           |              |
|-------------------------------------------------|------------|-------------|---------------|---------------|----------------|--------------------|--------------|
| Descrierea bunurilor: Armatura laminata rotunda |            |             |               |               |                | ET 01/01-047:2020; |              |
| No                                              | Nr. sarjei | Nr. lotului | Marca de otel | Dimensiune mm | Lungime mm     | Numar de legaturi  | Greutatea MT |
| 1                                               | 22300824   |             | A240C         | 16            | 12000 (+/-100) | 8                  | 21.372       |
|                                                 |            |             |               |               |                | 8                  | 21.372       |

| Compozitie Chimica - % |        |         |         |         |         |        |
|------------------------|--------|---------|---------|---------|---------|--------|
| No                     | C x100 | Si x100 | P x1000 | S x1000 | N x1000 | Ceq x1 |
| 1                      | 20     | 14      | 16      | 8       | 8       | .33    |

| Proprietati mecanice |                                              |                                 |                            |                            |                  |                  |
|----------------------|----------------------------------------------|---------------------------------|----------------------------|----------------------------|------------------|------------------|
| No                   | Rezistenta la rupere la tractiune, Rm, N/mm2 | Limita de curgere, Rp0.2, N/mm2 | Alungirea la rupere, A5, % | Masa pe metru liniar, kg/m | Raport Rm/Rp0.2, | Indoire la rece, |
| 1                    | 514                                          | 361                             | 33.5                       | 1.571                      | 1.43             | buna             |

Materialul a fost testat radiologic si nu emite radiatii periculoase  
 Nota



|          |                                                                                                                                                                                    |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Marcarea | <br>Semnatura: controller<br>departament de control tehnic<br>Novoselova N. lu.<br>18.05.2023 |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Публічне акціонерне товариство "Запорізький металургійний комбінат "Запоріжсталь"  
Public Joint Stock Company "Integrated Iron and Steel Works "Zaporizhstal"

Україна 69008 м. Запоріжжя Південне шосе, 72  
факс +38 (061) 213-18-58

UKRAINE 69008 Zaporizhzhya 72, Pivdenne Shose  
Fax +38 (061) 213-18-58

СЕРТИФІКАТ ЯКОСТІ / QUALITY CERTIFICATE № 81713

від / date 12.07.2023

Одержувач / consignee

Замовлення комбінату № / Manufacturer's works order

2023 982000-0005

Контракт № / Contract

МЗК-1327342/10/20/СМЦ-С

від/ date 06.10.2020

Вид свідчення про випробування  
Type of inspection document

EN 10204/3.1

Вагон № / Freight car: 61541900

Вид вантажмість / Type of packages пачки / packs  
Кількість місць/Number of packages 8

Найменування та код товару / Description and code of goods

98200 Прокат г/к з конструкційної нелегованої сталі в листах з  
сочеподібним рифленням

НД на продукцію; хіміклад / Specification forms and record  
ГОСТ 8568-77  
ASTM A36/A36M-19

Результати випробувань / Result of trial

| № п/п<br>Item № | № плавки<br>Heat № | № партії<br>Batch № | Марка<br>Grade | Категорія<br>Category | Група<br>міцності<br>Group of<br>strength | Розміри, мм<br>Dimensions, mm |                 |                   | Кількість<br>товару<br>Number<br>of<br>goods | С<br>о<br>п | Маса, т<br>Mass, tons |                   |              |
|-----------------|--------------------|---------------------|----------------|-----------------------|-------------------------------------------|-------------------------------|-----------------|-------------------|----------------------------------------------|-------------|-----------------------|-------------------|--------------|
|                 |                    |                     |                |                       |                                           | Товщина<br>Thickness          | Ширина<br>Width | Довжина<br>Length |                                              |             | брутто<br>gross       | брутто2<br>gross2 | нетто<br>net |
| 1               | 217040-3           | 103493-1            | A36            |                       |                                           | 3,00                          | 1000            | 6000              |                                              | 1           | 6,055                 |                   | 6,040        |
| 2               | 217040-3           | 103493-2            | A36            |                       |                                           | 3,00                          | 1000            | 6000              |                                              | 1           | 5,845                 |                   | 5,830        |
| 3               | 217040-3           | 103493-3            | A36            |                       |                                           | 3,00                          | 1000            | 6000              |                                              | 1           | 5,345                 |                   | 5,330        |
| 4               | 217040-3           | 103493-4            | A36            |                       |                                           | 3,00                          | 1000            | 6000              |                                              | 1           | 5,195                 |                   | 5,180        |
| 5               | 317794-3           | 103494-1            | A36            |                       |                                           | 3,00                          | 1000            | 6000              |                                              | 1           | 5,355                 |                   | 5,340        |
| 6               | 317794-3           | 103494-2            | A36            |                       |                                           | 3,00                          | 1000            | 6000              |                                              | 1           | 5,325                 |                   | 5,310        |
| 7               | 317794-3           | 103494-3            | A36            |                       |                                           | 3,00                          | 1000            | 6000              |                                              | 1           | 5,205                 |                   | 5,190        |
| 8               | 317794-3           | 103494-4            | A36            |                       |                                           | 3,00                          | 1000            | 6000              |                                              | 1           | 5,300                 |                   | 5,300        |
|                 |                    |                     |                |                       |                                           |                               |                 |                   |                                              |             | 43,640                |                   | 43,520       |



Даними цього сертифікату підтверджується, що продукція випробувана і відповідає стандартам якості, діючим в Україні, технічним умовам і погодженим умовам замовлення контракту.  
It is hereby certified that the quality of goods mentioned in this shipping document is in conformity with the standards in the Ukraine, specifications and goods may be expofed.



| № п/п<br>Item № | № позиції<br>замовлення<br>Order<br>reference № | Ознака<br>обробки<br>Sign<br>treatment | Шифр<br>катег.<br>групи<br>Group<br>code | Шорсткість<br>поверхні<br>Pattern<br>cutting | Якість<br>поверхні<br>Surface<br>quality | Точність<br>прокатки /<br>виробництва<br>Rolling<br>accuracy /<br>manufacturing | Категорія<br>випуску<br>Category<br>of<br>drawing | Щорічність<br>Flatness | Характер<br>крючки<br>Trim<br>of edge | Гарантія<br>зварюваності<br>Weldability | Оздоблення<br>поверхні<br>Surface<br>finish | Інші<br>характеристики<br>Other<br>features |
|-----------------|-------------------------------------------------|----------------------------------------|------------------------------------------|----------------------------------------------|------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------|------------------------|---------------------------------------|-----------------------------------------|---------------------------------------------|---------------------------------------------|
| 1-8             | 1                                               | Б/ТРАВЛ                                | 859                                      | 4                                            |                                          |                                                                                 |                                                   |                        | К                                     |                                         |                                             |                                             |

| № п/п<br>Item № | № плавки<br>Heat № | Хімічний склад, % |            |            |            |            |            |            |            |            |             | Composition, % |            |             |          |            |             |
|-----------------|--------------------|-------------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|----------------|------------|-------------|----------|------------|-------------|
|                 |                    | C<br>x100         | Mn<br>x100 | Si<br>x100 | S<br>x1000 | P<br>x1000 | Cr<br>x100 | Ni<br>x100 | Cu<br>x100 | As<br>x100 | N2<br>x1000 | Al<br>x100     | Ti<br>x100 | Mo<br>x1000 | CEV<br>% | V<br>x1000 | B<br>x10000 |
| 1-4             | 217040-3           | 2                 | 49         | 3          | 22         | 14         | 4          | 2          | 2          | 2          | 5           | 3              | 1          | 3           | 0.113    | 2          |             |
| 5-8             | 317794-3           | 2                 | 51         | 1          | 24         | 13         | 5          | 1          | 2          | 1          | 5           |                | 1          | 3           | 0.118    | 2          |             |



ПРИМІТКА: Висота ріфлі 0,6-0,81мм

Штамп, підпис відповідальної особи  
Stamp, signature of the person in charge

Достовірність сертифікату можна перевірити в реєстрі сертифікатів комбінату, на сайті <http://metinvest.io> шляхом введення номера сертифікату і шифру, розміщеного на зворотньому боці у графі "Штамп, підпис експерта", або шляхом прочитування QR-коду і переходу по прямому посиланню на сайт. В разі виявлення факту підробки сертифікатів просимо Вас повідомити про це на електронну адресу [otk@zaporizhstal.com](mailto:otk@zaporizhstal.com)

The authenticity of the certificate can be checked in the register of the plant's certificates on the site <http://metinvest.io> by entering the certificate number and the cipher placed on the reverse side in the "Stamp, expert signature" cell, or by reading the QR code and go to a direct link to the site. In case of detection of the fact of forgery of certificates, we kindly ask you to inform about this to the email address [otk@zaporizhstal.com](mailto:otk@zaporizhstal.com)



3062230213

Даний сертифікат якості підписаний електронним цифровим підписом контролера ВТК. Перевірити валідність документа можна на державному сайті <https://czo.gov.ua/verify>  
This quality certificate is signed by the electronic digital signature of the controller of the technical control department. You can check the validity of the document on the state website <https://czo.gov.ua/verify>

Публічне акціонерне товариство "Запорізький металургійний комбінат "Запоріжсталь"

Public Joint Stock Company "Integrated Iron and Steel Works "Zaporizhstal"

Україна 69008 м. Запоріжжя Південне шосе.72

UKRAINE 69008 Zaporizhzhya 72, Pivdenne Shose

факс +38 (061) 213-18-58

Fax +38 (061) 213-18-58

СЕРТИФІКАТ ЯКОСТІ / QUALITY CERTIFICATE № 509619

від / date 03.04.2023

Одержувач / consignee

Замовлення комбінату № / Manufacturer's works order

Філія ТОВ "МЕТІНВЕСТ-СМЦ" у м.Дніпро

2023 971000-0253

52012 с. Партизанське вул.Заводська, 6.25

Контракт № / Contract

станція призначення НИЖНЬОДНІПРОВСЬК-ПРИСТАНЬ (Придн.ЗАЛ.)

МЗК-1327342/10/20/СМЦ-С

від/date 06.10.2020

Вид свідчення про випробування

Type of inspection document

EN 10204/3.1

|                                                                     |                                                            |
|---------------------------------------------------------------------|------------------------------------------------------------|
| Вагон № / Freight car: 65296147                                     | Вид вантажмісць / Type of packages пачки / packs           |
|                                                                     | Кількість місць/Number of packages 9                       |
| Найменування та код товару / Description and code of goods          | НД на продукцію; хімсклад / Specification forms and record |
| 97100 Прокат товстолистовий г/к з вуглицевої сталі звичайної якості | ДСТУ 8803:2018                                             |
| Маркування продукції: ГАРЯЧЕКАТАНИЙ ЛИСТ / HOT ROLLED STEEL SHEETS  | ДСТУ 2651:2005/ГОСТ 380-2005                               |
|                                                                     | ДСТУ 8540:2015                                             |

Результати випробувань / Result of trial

| № п/п<br>Item № | № плавки<br>Heat № | № партії<br>Batch № | Марка<br>Grade | Категорія<br>Category | Група<br>міцності<br>Group of<br>strength | Розміри, мм<br>Dimensions, mm |                 |                   | Кількість<br>товару<br>Number<br>of<br>goods | С<br>о<br>р<br>т | Маса, т<br>Mass, tons |                   |              |
|-----------------|--------------------|---------------------|----------------|-----------------------|-------------------------------------------|-------------------------------|-----------------|-------------------|----------------------------------------------|------------------|-----------------------|-------------------|--------------|
|                 |                    |                     |                |                       |                                           | Товщина<br>Thickness          | Ширина<br>Width | Довжина<br>Length |                                              |                  | брутто<br>gross       | брутто2<br>gross2 | нетто<br>net |
| 1               | 1213020            | 21275-2             | СТЗПС          | 5                     |                                           | 4,00                          | 1500            | 6000              | 26                                           | 1                | 7,405                 |                   | 7,390        |
| 2               | 1213020            | 21275-8             | СТЗПС          | 5                     |                                           | 4,00                          | 1500            | 6000              | 27                                           | 1                | 7,915                 |                   | 7,900        |
| 3               | 1213020            | 21275-9             | СТЗПС          | 5                     |                                           | 4,00                          | 1500            | 6000              | 27                                           | 1                | 7,660                 |                   | 7,645        |
| 4               | 1213020            | 21275-10            | СТЗПС          | 5                     |                                           | 4,00                          | 1500            | 6000              | 27                                           | 1                | 7,690                 |                   | 7,675        |
| 5               | 1213020            | 21275-11            | СТЗПС          | 5                     |                                           | 4,00                          | 1500            | 6000              | 27                                           | 1                | 7,735                 |                   | 7,720        |
| 6               | 1213020            | 21275-12            | СТЗПС          | 5                     |                                           | 4,00                          | 1500            | 6000              | 27                                           | 1                | 7,675                 |                   | 7,660        |
| 7               | 1213020            | 21275-13            | СТЗПС          | 5                     |                                           | 4,00                          | 1500            | 6000              | 27                                           | 1                | 7,650                 |                   | 7,635        |
| 8               | 813036             | 21276-1             | СТЗПС          | 5                     |                                           | 4,00                          | 1500            | 6000              | 27                                           | 1                | 7,815                 |                   | 7,800        |
| 9               | 813036             | 21276-3             | СТЗПС          | 5                     |                                           | 4,00                          | 1500            | 6000              | 16                                           | 1                | 4,080                 |                   | 4,035        |
| РАЗОМ           |                    |                     |                |                       |                                           |                               |                 |                   |                                              |                  | 65,595                |                   | 65,460       |



Даними цього сертифікату підтверджується, що продукція випробувана і відповідає стандартам якості, діючим в Україні, технічним умовам і погодженим умовам замовлення контракту.  
It is hereby certified that the quality of goods mentioned in this shipping document is in conformity with the standards in the Ukraine, specifications and goods may be expofed.



| № п/ч<br>Item № | № позиції<br>замовлення<br>Order<br>reference № | Ознака<br>обробки<br>Sign<br>treatment | Шифр<br>кальк.<br>групи<br>Group<br>code | Форма розрізу<br>Pattern<br>cutting | Якість<br>поверхні<br>Surface<br>quality | Точність<br>прокатки /<br>пиготовлення<br>Rolling<br>accuracy /<br>manufacturing | Категорія<br>вигляди<br>Category<br>of<br>drawing | Площинність<br>Flatness | Характер<br>кромки<br>Trim<br>of edge | Гарантия<br>зварювання<br>Weldability | Оздоблення<br>поверхні<br>Surface finish | Інші<br>характеристики<br>Other<br>features |
|-----------------|-------------------------------------------------|----------------------------------------|------------------------------------------|-------------------------------------|------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------|-------------------------|---------------------------------------|---------------------------------------|------------------------------------------|---------------------------------------------|
| 1-9             | 1                                               | Б/ТРАВЛ                                | 503                                      | 4                                   |                                          | Б                                                                                |                                                   | ПН                      | НО                                    | СВ                                    |                                          |                                             |

| № п/ч<br>Item № | № плавки<br>Heat № | Хімічний склад, % |            |            |            |            |            |            |            |            |             | Composition, % |            |             |          |            |             |
|-----------------|--------------------|-------------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|----------------|------------|-------------|----------|------------|-------------|
|                 |                    | C<br>x100         | Mn<br>x100 | Si<br>x100 | S<br>x1000 | P<br>x1000 | Cr<br>x100 | Ni<br>x100 | Cu<br>x100 | As<br>x100 | N2<br>x1000 | Al<br>x100     | Ti<br>x100 | Mo<br>x1000 | CEV<br>% | V<br>x1000 | B<br>x10000 |
| 1-7             | 1213020*           | 17                | 41         | 2.3        | 32         | 36         | 4          | 1          | 1          | 8          | 8           |                | 0,1        | 3           | 0,249    | 2          |             |
| 8-9             | 813036             | 14                | 43         | 1.7        | 35         | 34         | 5          | 1          | 1          | 8          | 8           |                | 0,1        | 4           | 0,224    | 2          |             |

| № п/ч<br>Item № | Механічні і технологічні властивості |                 |                                    |                                        |                                     |                                   |                                   |               |                       |                                  |                                      |     |                                                  |     |                                    | Mechanical and technological properties |                                  |                                   |                              |                         |                                     |                                    |   |                                    |  |
|-----------------|--------------------------------------|-----------------|------------------------------------|----------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|---------------|-----------------------|----------------------------------|--------------------------------------|-----|--------------------------------------------------|-----|------------------------------------|-----------------------------------------|----------------------------------|-----------------------------------|------------------------------|-------------------------|-------------------------------------|------------------------------------|---|------------------------------------|--|
|                 | Розміри зразка<br>D.m of specimen    |                 | Місце відб. пр.<br>Sample Location | Напрямок відб. пр.<br>Dir. of test pr. | Тимчасовий опір<br>Tensile strength | Гранична плинність<br>Yield point | Відносне подовження<br>Elongation | Вигин<br>Bend | Твердість<br>Hardness | Глибина сфери, лунки<br>Erickson | Ударна в'язкість<br>Impact toughness |     |                                                  |     |                                    |                                         | Номер зерна фериту<br>Grain size | Декарбонізація<br>Decarburization | Шорсткість<br>Roughness (RA) | Цементація<br>Cementite | Метод випробувань<br>Testing method |                                    |   |                                    |  |
|                 | Товщина<br>Thickness                 | Ширина<br>Width |                                    |                                        |                                     |                                   |                                   |               |                       |                                  | KCU                                  | KCV | Після механічного старіння<br>After mech. ageing |     |                                    |                                         |                                  |                                   |                              |                         |                                     |                                    |   |                                    |  |
|                 |                                      |                 |                                    |                                        |                                     |                                   |                                   |               |                       |                                  |                                      |     | mm                                               | t   | mm <sup>2</sup><br>cm <sup>2</sup> | t                                       |                                  |                                   |                              |                         |                                     | mm <sup>2</sup><br>cm <sup>2</sup> | t | mm <sup>2</sup><br>cm <sup>2</sup> |  |
|                 |                                      |                 |                                    |                                        |                                     |                                   |                                   |               |                       |                                  |                                      |     |                                                  |     |                                    |                                         |                                  |                                   |                              |                         |                                     |                                    |   |                                    |  |
| 1-7             | 4.00                                 | 1500            | S.E                                | L.T                                    | 45,5                                | 31,5                              | 33,0                              | уд            |                       |                                  |                                      |     | -20                                              | 7,6 | 20                                 | 13,2                                    | 20                               | 7,7                               |                              |                         |                                     | руйн                               |   |                                    |  |
|                 | 4.00                                 | 1500            |                                    |                                        |                                     |                                   |                                   |               |                       |                                  |                                      |     | -20                                              | 7,6 | 20                                 | 12,6                                    | 20                               | 7,3                               |                              |                         |                                     | руйн                               |   |                                    |  |
| 8-9             | 4.00                                 | 1500            |                                    |                                        | 46,0                                | 32,0                              | 31,0                              | уд            |                       |                                  |                                      |     | -20                                              | 7,0 | 20                                 | 13,4                                    | 20                               | 6,8                               |                              |                         |                                     | руйн                               |   |                                    |  |
|                 | 4.00                                 | 1500            |                                    |                                        |                                     |                                   |                                   |               |                       |                                  |                                      |     | -20                                              | 7,6 | 20                                 | 14,1                                    | 20                               | 6,8                               |                              |                         |                                     | руйн                               |   |                                    |  |

\*S-початок смуги/strip start; E-кінець смуги/strip end; L-поздовжнє/longitudinal, T-поперечнє/Transverse"



ЗАУВ.Х/А: плавка з індексом Продукта аргонном Розкислена А1

Штамп, підпис відповідальної особи.  
Stamp, signature of the person in charge

Достовірність сертифікату можна перевірити в реєстрі сертифікатів комбінату, на сайті <http://metinvest.io> шляхом введення номера сертифікату і шифру, розміщеного на зворотньому боці у графі "Штамп, підпис експерта", або шляхом прочитування QR-коду і переходу по прямому посиланню на сайт. В разі виявлення факту підробки сертифікатів просимо Вас повідомити про це на електронну адресу [otk@zaporizhstal.com](mailto:otk@zaporizhstal.com)

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Даний сертифікат якості підписаний електронним цифровим підписом контролера ВТК. Перевірити валідність документа можна на державному сайті <https://czo.gov.ua/verify>  
This quality certificate is signed by the electronic digital signature of the controller of the technical control department. You can check the validity of the document on the state website <https://czo.gov.ua/verify>

Публічне акціонерне товариство "Запорізький металургійний комбінат "Запоріжсталь"  
Public Joint Stock Company "Integrated Iron and Steel Works "Zaporizhstal"

Україна 69008 м. Запоріжжя Південне шосе, 72  
факс +38 (061) 213-18-58

UKRAINE 69008 Zaporizhzhya 72. Pivdenne Shose  
Fax +38 (061) 213-18-58

СЕРТИФІКАТ ЯКОСТІ / QUALITY CERTIFICATE № 80913 від / date 17.04.2023

Одержувач / consignee

Філія ТОВ "МЕТІНВЕСТ-СМЦ" у м. Одеса  
65031 м. Одеса, Одеська обл. дор. Новомосковская, б. 23/1  
станція призначення ОДЕСА-ЗАСТАВА 1 (Од.ЗАЛ.)

Замовлення комбінату № / Manufacturer's works order

2023 971000-0280  
Контракт № / Contract  
МЗК-1327342/10/20/СМЦ-С  
від / date 06.10.2020

Вид свідчення про випробування  
Type of inspection document  
EN 10204/3.1

|                                                                                                                                         |                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Вагон № / Freight car: 55671556                                                                                                         | Вид вантажмисць / Type of packages: пакки / packs                                                                            |
|                                                                                                                                         | Кількість місць / Number of packages: 10                                                                                     |
| Найменування та код товару / Description and code of goods: 97100 Прокат листовий г/к з вуглецевої сталі звичайної якості без травлення | ІД на продукцію, хіміклад / Specification forms and record: ДСТУ 8803:2018<br>ДСТУ 2651:2005/ГОСТ 380-2005<br>ДСТУ 8540:2015 |
| Маркування продукції: ГАРЯЧКАТАНИЙ ЛИСТ / HOT ROLLED STEEL SHEETS                                                                       |                                                                                                                              |

Результати випробувань / Result of trial

| № п/п<br>Item № | № плавки<br>Heat № | № партії<br>Batch № | Марка<br>Grade | Категорія<br>Category | Група<br>міцності<br>Group of<br>strength | Розміри, мм<br>Dimensions, mm |                 |                   | Кількість<br>товару<br>Number<br>of<br>goods | Маса, т<br>Mass, tons |                   |              |
|-----------------|--------------------|---------------------|----------------|-----------------------|-------------------------------------------|-------------------------------|-----------------|-------------------|----------------------------------------------|-----------------------|-------------------|--------------|
|                 |                    |                     |                |                       |                                           | Товщина<br>Thickness          | Ширина<br>Width | Довжина<br>Length |                                              | брутто<br>gross       | брутто2<br>gross2 | нетто<br>net |
| 1               | 823061             | 101690-15           | СТЗПС          | 5                     |                                           | 6,00                          | 1500            | 6000              | 1                                            | 6,210                 |                   | 6,190        |
| 2               | 823061             | 101690-16           | СТЗПС          | 5                     |                                           | 6,00                          | 1500            | 6000              | 1                                            | 6,170                 |                   | 6,150        |
| 3               | 823061             | 101690-17           | СТЗПС          | 5                     |                                           | 6,00                          | 1500            | 6000              | 1                                            | 6,230                 |                   | 6,210        |
| 4               | 823061             | 101690-18           | СТЗПС          | 5                     |                                           | 6,00                          | 1500            | 6000              | 1                                            | 6,250                 |                   | 6,230        |
| 5               | 823061             | 101690-19           | СТЗПС          | 5                     |                                           | 6,00                          | 1500            | 6000              | 1                                            | 4,150                 |                   | 4,130        |
| 6               | 1223060            | 101771-3            | СТЗПС          | 5                     |                                           | 8,00                          | 1500            | 6000              | 1                                            | 6,705                 |                   | 6,690        |
| 7               | 1223060            | 101771-4            | СТЗПС          | 5                     |                                           | 8,00                          | 1500            | 6000              | 1                                            | 6,745                 |                   | 6,730        |
| 8               | 1223060-9          | 101773-1            | СТЗПС          | 5                     |                                           | 8,00                          | 1500            | 6000              | 1                                            | 6,715                 |                   | 6,700        |
| 9               | 1223060-9          | 101773-2            | СТЗПС          | 5                     |                                           | 8,00                          | 1500            | 6000              | 1                                            | 6,705                 |                   | 6,690        |
| 10              | 1223060-9          | 101773-3            | СТЗПС          | 5                     |                                           | 8,00                          | 1500            | 6000              | 1                                            | 6,685                 |                   | 6,670        |
| Разом:          |                    |                     |                |                       |                                           |                               |                 |                   |                                              | 62,565                |                   | 62,390       |



Даними цього сертифікату підтверджується, що продукція випробувана і відповідає стандартам якості, діючим в Україні, технічним умовам і погодженим умовам замовлення контракту.  
It is hereby certified that the quality of goods mentioned in this shipping document is in conformity with the standards in the Ukraine, specifications and goods may be exported.



| № п/п<br>Item № | № позиції<br>замовлення<br>Order<br>reference № | Ознака<br>обробки<br>Sign<br>treatment | Шифр<br>кальк.<br>групи<br>Group<br>code | Форма розрізу<br>Pattern<br>cutting | Якість<br>поверхні<br>Surface<br>quality | Точність<br>прокатки /<br>виготовлення<br>Rolling<br>accuracy /<br>manufacturing | Категорія<br>напруги<br>Category<br>of<br>drawing | Плюсність<br>Flattess | Характер<br>кромки<br>Trim<br>of edge | Гарантія<br>зварювання<br>Weldability | Очищення<br>поверхні<br>Surface finish | Інші<br>характеристики<br>Other<br>features |
|-----------------|-------------------------------------------------|----------------------------------------|------------------------------------------|-------------------------------------|------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------|-----------------------|---------------------------------------|---------------------------------------|----------------------------------------|---------------------------------------------|
| 1-5             | 1                                               | Б/ТРАВЛ                                | 88102                                    | 4                                   |                                          | Б                                                                                |                                                   | ПН                    | НО                                    |                                       |                                        |                                             |
| 6-10            | 2                                               | Б/ТРАВЛ                                | 88102                                    | 4                                   |                                          | Б                                                                                |                                                   | ПН                    | НО                                    |                                       |                                        |                                             |

| № п/п<br>Item № | № плавки<br>Heat № | Хімічний склад, %<br>Composition, % |            |            |            |            |            |            |            |            |             | Ti<br>x100 | Mo<br>x1000 | CEV<br>% | V<br>x1000 | B<br>x10000 |
|-----------------|--------------------|-------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|------------|-------------|----------|------------|-------------|
|                 |                    | C<br>x100                           | Mn<br>x100 | Si<br>x100 | S<br>x1000 | P<br>x1000 | Cr<br>x100 | Ni<br>x100 | Cu<br>x100 | As<br>x100 | N2<br>x1000 |            |             |          |            |             |
| 1-5             | 823061             | 18                                  | 37         | 1.7        | 41         | 12         | 4          | 1          | 1          | 8          | 8           | 0.1        | 1           | 0.251    | 1          |             |
| 6-7             | 1223060            | 17                                  | 39         | 2          | 30         | 24         | 4          | 1          | 1          | 8          | 8           | 0.1        | 4           | 0.246    | 3          |             |
| 8-10            | 1223060-9          | 17                                  | 39         | 2          | 30         | 24         | 4          | 1          | 1          | 8          | 8           | 0.1        | 4           | 0.246    | 3          |             |

| № п/п<br>Item № | Механічні і технологічні властивості      Mechanical and technological properties |                 |                                    |                                        |                                     |                     |                                      |                                   |               |                       |                                 |                                      |      |     |      |                                                 |     |   | Повітряний ферит<br>Grain size | Декарбонізація<br>Decarburization | Шорсткість<br>Roughness (RA) | Цегмент<br>Cementite | Метод випробувань<br>Testing method |   |
|-----------------|-----------------------------------------------------------------------------------|-----------------|------------------------------------|----------------------------------------|-------------------------------------|---------------------|--------------------------------------|-----------------------------------|---------------|-----------------------|---------------------------------|--------------------------------------|------|-----|------|-------------------------------------------------|-----|---|--------------------------------|-----------------------------------|------------------------------|----------------------|-------------------------------------|---|
|                 | Розміри зразка<br>D m of specimen                                                 |                 | Місце відб. пр.<br>Sample Location | Напрямок відб. пр.<br>Dir. of test pr. | Тягочасний нап.<br>Tensile strength |                     | Гранична пластичність<br>Yield point | Відносне подовження<br>Elongation | Витяг<br>Bend | Твердість<br>Hardness | Глибина сфери дулки<br>Erickson | Ударна в'язкість<br>Impact toughness |      |     |      |                                                 |     |   |                                |                                   |                              |                      |                                     |   |
|                 | Товщина<br>Thickness                                                              | Ширина<br>Width |                                    |                                        | кгс/мм <sup>2</sup>                 | кгс/мм <sup>2</sup> |                                      |                                   |               |                       |                                 | %                                    | УД   | КCU | КCV  | Після механічного старіння<br>After mech ageing |     |   |                                |                                   |                              |                      |                                     |   |
|                 |                                                                                   |                 |                                    |                                        |                                     |                     |                                      |                                   |               |                       |                                 |                                      |      |     |      | t                                               | t   | t |                                |                                   |                              |                      |                                     | t |
|                 |                                                                                   |                 |                                    |                                        |                                     |                     |                                      |                                   |               |                       |                                 |                                      |      |     |      |                                                 |     |   |                                |                                   |                              |                      |                                     |   |
| 1-5             | 6.00                                                                              | 1500            |                                    |                                        | 42,5                                | 26,0                | 33,0                                 |                                   | УД            |                       |                                 | -20                                  | 16,8 | 20  | 6,6  | 250                                             | 7,7 |   |                                | руїни                             |                              |                      |                                     |   |
|                 | 6.00                                                                              | 1500            |                                    |                                        | 42,0                                | 26,5                | 32,0                                 |                                   | УД            |                       |                                 | -20                                  | 15,7 | 20  | 7,7  | 250                                             | 6,4 |   |                                | руїни                             |                              |                      |                                     |   |
|                 | 6.00                                                                              | 1500            |                                    |                                        |                                     |                     |                                      |                                   |               |                       |                                 | -20                                  | 16,3 | 20  | 7,9  | 250                                             | 6,8 |   |                                | руїни                             |                              |                      |                                     |   |
|                 | 6.00                                                                              | 1500            |                                    |                                        |                                     |                     |                                      |                                   |               |                       |                                 | -20                                  | 17,3 | 20  | 7,1  | 250                                             | 7,6 |   |                                | руїни                             |                              |                      |                                     |   |
| 6-7             | 6.00                                                                              | 1500            |                                    |                                        |                                     |                     |                                      |                                   |               |                       |                                 | -20                                  | 16,8 | 20  | 7,3  | 250                                             | 6,6 |   |                                | руїни                             |                              |                      |                                     |   |
|                 | 6.00                                                                              | 1500            |                                    |                                        |                                     |                     |                                      |                                   |               |                       |                                 | -20                                  | 16,5 | 20  | 6,8  | 250                                             | 7,5 |   |                                | руїни                             |                              |                      |                                     |   |
|                 | 8.00                                                                              | 1500            |                                    |                                        | 42,0                                | 27,5                | 31,0                                 |                                   | УД            |                       |                                 | -20                                  | 7,1  | 20  | 15,2 | 250                                             | 6,7 |   |                                | руїни                             |                              |                      |                                     |   |
|                 | 8.00                                                                              | 1500            |                                    |                                        | 42,5                                | 29,5                | 33,0                                 |                                   | УД            |                       |                                 | -20                                  | 8,1  | 20  | 16,4 | 250                                             | 5,5 |   |                                | руїни                             |                              |                      |                                     |   |
| 8-10            | 8.00                                                                              | 1500            |                                    |                                        |                                     |                     |                                      |                                   |               |                       |                                 | -20                                  | 7,4  | 20  | 17,2 | 250                                             | 5,9 |   |                                | руїни                             |                              |                      |                                     |   |
|                 | 8.00                                                                              | 1500            |                                    |                                        |                                     |                     |                                      |                                   |               |                       |                                 | -20                                  | 7,8  | 20  | 16,7 | 250                                             | 6,6 |   |                                | руїни                             |                              |                      |                                     |   |
|                 | 8.00                                                                              | 1500            |                                    |                                        |                                     |                     |                                      |                                   |               |                       |                                 | -20                                  | 8,6  | 20  | 14,9 | 250                                             | 7,8 |   |                                | руїни                             |                              |                      |                                     |   |
|                 | 8.00                                                                              | 1500            |                                    |                                        |                                     |                     |                                      |                                   |               |                       |                                 | -20                                  | 7,4  | 20  | 15,2 | 250                                             | 5,9 |   |                                | руїни                             |                              |                      |                                     |   |
|                 | 8.00                                                                              | 1500            |                                    |                                        | 42,5                                | 27,0                | 30,0                                 |                                   | УД            |                       |                                 | -20                                  | 6,0  | 20  | 16,2 | 250                                             | 6,0 |   |                                | руїни                             |                              |                      |                                     |   |
|                 | 8.00                                                                              | 1500            |                                    |                                        | 42,5                                | 28,0                | 31,0                                 |                                   | УД            |                       |                                 | -20                                  | 6,4  | 20  | 15,9 | 250                                             | 6,8 |   |                                | руїни                             |                              |                      |                                     |   |
|                 | 8.00                                                                              | 1500            |                                    |                                        |                                     |                     |                                      |                                   |               |                       |                                 | -20                                  | 5,7  | 20  | 16,3 | 250                                             | 5,9 |   |                                | руїни                             |                              |                      |                                     |   |
|                 | 8.00                                                                              | 1500            |                                    |                                        |                                     |                     |                                      |                                   |               |                       |                                 | -20                                  | 6,6  | 20  | 13,8 | 250                                             | 6,2 |   |                                | руїни                             |                              |                      |                                     |   |
|                 | 8.00                                                                              | 1500            |                                    |                                        |                                     |                     |                                      |                                   |               |                       |                                 | -20                                  | 6,5  | 20  | 12,8 | 250                                             | 6,8 |   |                                | руїни                             |                              |                      |                                     |   |
|                 | 8.00                                                                              | 1500            |                                    |                                        |                                     |                     |                                      |                                   |               |                       |                                 | -20                                  | 6,7  | 20  | 14,9 | 250                                             | 6,0 |   |                                | руїни                             |                              |                      |                                     |   |

\*S-початок смуги/strip start; E-кінець смуги/strip end; L-подовжик/longitudinal; T-поперечне/Transverse



ЗАУВ.Х/А: цівка з індексом Продукта аргоном Розкислена АІ

Штамп, підпис відповідальної особи  
Stamp, signature of the person in charge

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СЕРТИФІКАТ ЯКОСТІ / QUALITY CERTIFICATE № 81736 від / date 16.07.2023

Одержувач / consignee

Замовлення комбінату № / Manufacturer's works order

Філія ТОВ "МЕТІНВЕСТ-СМЦ" у м.Дніпро  
52012 с. Партизанське вул.Заводська, 6.25  
станція призначення НИЖНЬОДНІПРОВСЬК-ПРИСТАНЬ (Придн.ЗАЛ.)

2023 971000-0536

Контракт № / Contract

МЗК-1327342/10/20/СМЦ-С

bin/date 06.10.2020

Вид свідотства про випробування  
Type of inspection document  
EN 10204/3.1

|                                                                                                                                                    |                                                                                                         |                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|---------------------|
| Вагон № / Freight car: <b>67193029</b>                                                                                                             | Вид вантажмиць / Type of packages<br>Кількість місць/Number of packages                                 | пачки / packs<br>10 |
| Найменування та код товару / Description and code of goods<br><b>97100 Прокат гарячекатаний товстолистовий з вуглецевої сталі звичайної якості</b> | НД на продукцію; хімсклад / Specification forms and record<br><b>EN 10025-2:2019<br/>ДСТУ 8540:2015</b> |                     |
| Маркування продукції: <b>ГАРЯЧЕКАТАНИЙ ЛИСТ / HOT ROLLED STEEL SHEETS</b>                                                                          |                                                                                                         |                     |

### Результати випробувань / Result of trial

| № п/п<br>Item № | № плавки<br>Heat № | № партії<br>Batch № | Марка<br>Grade | Категорія<br>Category | Група<br>міцності<br>Group of<br>strength | Розміри, мм<br>Dimensions, mm |                 |                   | Кількість<br>товару<br>Number of<br>goods | С<br>р<br>т | Маса, т<br>Mass, tons |                   |              |
|-----------------|--------------------|---------------------|----------------|-----------------------|-------------------------------------------|-------------------------------|-----------------|-------------------|-------------------------------------------|-------------|-----------------------|-------------------|--------------|
|                 |                    |                     |                |                       |                                           | Товщина<br>Thickness          | Ширина<br>Width | Довжина<br>Length |                                           |             | брутто<br>gross       | брутто2<br>gross2 | нетто<br>net |
| 1               | 1013147-8          | 103523-1            | S235JR+AR      |                       |                                           | 8,00                          | 1500            | 6000              |                                           | 1           | 6,165                 |                   | 6,150        |
| 2               | 1013147-8          | 103523-2            | S235JR+AR      |                       |                                           | 8,00                          | 1500            | 6000              |                                           | 1           | 6,135                 |                   | 6,120        |
| 3               | 1013147-8          | 103523-3            | S235JR+AR      |                       |                                           | 8,00                          | 1500            | 6000              |                                           | 1           | 6,715                 |                   | 6,700        |
| 4               | 1013147            | 103509-2            | S235JR+AR      |                       |                                           | 8,00                          | 1500            | 6000              |                                           | 1           | 6,635                 |                   | 6,620        |
| 5               | 1013147            | 103509-3            | S235JR+AR      |                       |                                           | 8,00                          | 1500            | 6000              |                                           | 1           | 6,705                 |                   | 6,690        |
| 6               | 1013147            | 103509-4            | S235JR+AR      |                       |                                           | 8,00                          | 1500            | 6000              |                                           | 1           | 6,715                 |                   | 6,700        |
| 7               | 1013147            | 103509-6            | S235JR+AR      |                       |                                           | 8,00                          | 1500            | 6000              |                                           | 1           | 6,155                 |                   | 6,140        |
| 8               | 1013147            | 103509-10           | S235JR+AR      |                       |                                           | 8,00                          | 1500            | 6000              |                                           | 1           | 6,165                 |                   | 6,150        |
| 9               | 1013147            | 103509-11           | S235JR+AR      |                       |                                           | 8,00                          | 1500            | 6000              |                                           | 1           | 6,735                 |                   | 6,720        |
| 10              | 1013147            | 103509-12           | S235JR+AR      |                       |                                           | 8,00                          | 1500            | 6000              |                                           | 1           | 6,695                 |                   | 6,680        |
| Разом:          |                    |                     |                |                       |                                           |                               |                 |                   |                                           |             | 64,820                |                   | 64,670       |



Даними цього сертифікату підтверджується, що продукція випробувана і відповідає стандартам якості, діючим в Україні, технічним умовам і погодженим умовам замовлення контрагенту.  
It is hereby certified that the quality of goods mentioned in this shipping document is in conformity with the standards in the Ukraine, specifications and goods may be expofed.



| № п/ч<br>Item № | № позиції<br>замовлення<br>Order<br>reference № | Ознака<br>обробки<br>Sign<br>treatment | Шифр<br>кальк.<br>групи<br>Group<br>code | Форма розкрою<br>Pattern cutting | Якість<br>поверхні<br>Surface<br>quality | Точність<br>прокатки /<br>виготовлення<br>Rolling<br>accuracy /<br>manufacturing | Категорія<br>витяжки<br>Category<br>of<br>drawing | Площинність<br>Flatness | Характер<br>кромки<br>Trim<br>of edge | Гарантия<br>зварювання<br>Weldability | Оздоблення<br>поверхні<br>Surface finish | Інші<br>характеристики<br>Other<br>features |
|-----------------|-------------------------------------------------|----------------------------------------|------------------------------------------|----------------------------------|------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------|-------------------------|---------------------------------------|---------------------------------------|------------------------------------------|---------------------------------------------|
| 1-10            | 2                                               | Б/ТРАВЛ                                | 88102                                    | 4                                |                                          |                                                                                  |                                                   |                         | НО                                    |                                       |                                          |                                             |

| № п/ч<br>Item № | № плавки<br>Heat № | Хімічний склад, % |            |            |            |            |            |            |            |            |             | Composition, % |            |             |          |            |             |  |
|-----------------|--------------------|-------------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|----------------|------------|-------------|----------|------------|-------------|--|
|                 |                    | C<br>x100         | Mn<br>x100 | Si<br>x100 | S<br>x1000 | P<br>x1000 | Cr<br>x100 | Ni<br>x100 | Cu<br>x100 | As<br>x100 | N2<br>x1000 | Al<br>x100     | Ti<br>x100 | Mo<br>x1000 | CEV<br>% | V<br>x1000 | B<br>x10000 |  |
| 1-3             | 1013147-8 *        | 17                | 37         | 2.3        | 33         | 35         | 7          | 2          | 2          | 8          | 9           |                | 0.1        | 5           | 0.25     | 4          |             |  |
| 4-10            | 1013147 *          | 17                | 37         | 2.3        | 33         | 35         | 7          | 2          | 2          | 8          | 9           |                | 0.1        | 5           | 0.25     | 4          |             |  |

| № п/ч<br>Item № | Механічні і технологічні властивості<br>Mechanical and technological properties |                 |                                |                                    |                                     |                                      |                                   |               |                       |                                    |                                      |     |                                                  |   |                                  |   |                                  |   |                                  |  | Номер зерна фериту<br>Grain size | Декарбонізація<br>Decarburization | Шорсткість<br>Roughness (RA) | Цементит Cementite<br>Метод випробувань<br>Testing method |
|-----------------|---------------------------------------------------------------------------------|-----------------|--------------------------------|------------------------------------|-------------------------------------|--------------------------------------|-----------------------------------|---------------|-----------------------|------------------------------------|--------------------------------------|-----|--------------------------------------------------|---|----------------------------------|---|----------------------------------|---|----------------------------------|--|----------------------------------|-----------------------------------|------------------------------|-----------------------------------------------------------|
|                 | Розміри зразка<br>D.m of specimen                                               |                 | Місце відб.пр. Sample Location | Напрямок відб.пр. Dir. of test pr. | Тимчасовий опір<br>Tensile strength | Гранична пластичність<br>Yield point | Відносне подовження<br>Elongation | Вигин<br>Bend | Твердість<br>Hardness | Глибина сферич. луники<br>Erickson | Ударна в'язкість<br>Impact toughness |     |                                                  |   |                                  |   |                                  |   |                                  |  |                                  |                                   |                              |                                                           |
|                 | Товщина<br>Thickness                                                            | Ширина<br>Width |                                |                                    |                                     |                                      |                                   |               |                       |                                    | KCU                                  | KCV | Після механічного старіння<br>After mech. ageing |   |                                  |   |                                  |   |                                  |  |                                  |                                   |                              |                                                           |
|                 |                                                                                 |                 |                                |                                    |                                     |                                      |                                   |               |                       |                                    |                                      |     | mm                                               | t | mm <sup>2</sup> /cm <sup>2</sup> | t | mm <sup>2</sup> /cm <sup>2</sup> | t | mm <sup>2</sup> /cm <sup>2</sup> |  |                                  |                                   |                              |                                                           |
| mm              | mm                                                                              | S.E             | L.T                            | KTC/4MM2                           | KTC/3MM2                            | %                                    |                                   |               |                       |                                    | mm                                   | t   | mm <sup>2</sup> /cm <sup>2</sup>                 | t | mm <sup>2</sup> /cm <sup>2</sup> | t | mm <sup>2</sup> /cm <sup>2</sup> | % | МКМ                              |  |                                  | руйн                              |                              |                                                           |
| 1-3             | 8.00                                                                            | 1500            | S                              | T                                  | 43,5                                | 30,5                                 | 30,0                              |               |                       |                                    |                                      |     |                                                  |   |                                  |   |                                  |   |                                  |  |                                  |                                   |                              |                                                           |
|                 | 8.00                                                                            | 1500            | S                              | T                                  | 43,5                                | 30,0                                 | 31,0                              |               |                       |                                    |                                      |     |                                                  |   |                                  |   |                                  |   |                                  |  |                                  |                                   |                              |                                                           |
|                 | 8.00                                                                            | 1500            | S                              | T                                  | 45,0                                | 30,5                                 | 27,0                              |               |                       |                                    |                                      |     |                                                  |   |                                  |   |                                  |   |                                  |  |                                  |                                   |                              |                                                           |
|                 | 8.00                                                                            | 1500            | S                              | T                                  | 45,5                                | 30,0                                 | 27,0                              |               |                       |                                    |                                      |     |                                                  |   |                                  |   |                                  |   |                                  |  |                                  |                                   |                              |                                                           |
| 4-10            | 8.00                                                                            | 1500            | S                              | T                                  | 43,5                                | 30,5                                 | 30,0                              |               |                       |                                    |                                      |     |                                                  |   |                                  |   |                                  |   |                                  |  |                                  |                                   |                              |                                                           |
|                 | 8.00                                                                            | 1500            | S                              | T                                  | 43,5                                | 30,0                                 | 31,0                              |               |                       |                                    |                                      |     |                                                  |   |                                  |   |                                  |   |                                  |  |                                  |                                   |                              |                                                           |
|                 | 8.00                                                                            | 1500            | S                              | T                                  | 45,0                                | 30,5                                 | 27,0                              |               |                       |                                    |                                      |     |                                                  |   |                                  |   |                                  |   |                                  |  |                                  |                                   |                              |                                                           |
|                 | 8.00                                                                            | 1500            | S                              | T                                  | 45,5                                | 30,0                                 | 27,0                              |               |                       |                                    |                                      |     |                                                  |   |                                  |   |                                  |   |                                  |  |                                  |                                   |                              |                                                           |

\*S-початок смуги/strip start; E-кінець смуги/strip end; L-подовжнє/longitudinal; T-поперечнє/Transverse"



ЗАУВ.Х/А: плавка з індексом Продукта аргоном Розкислена А1

Штамп, підпис відповідальної особи  
Stamp, signature of the person in charge

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The authenticity of the certificate can be checked in the register of the plant's certificates on the site <http://metinvest.io> by entering the certificate number and the cipher placed on the reverse side in the "Stamp, expert signature" cell, or by reading the QR code and going to a direct link to the site. In case of detection of the fact of forgery of certificates, we kindly ask you to inform about this to the email address [otk@zaporizhstal.com](mailto:otk@zaporizhstal.com)



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Даний сертифікат якості підписаний електронним цифровим підписом контролера ВТК. Перевірити валідність документа можна на державному сайті <https://czo.gov.ua/verify>  
This quality certificate is signed by the electronic digital signature of the controller of the technical control department. You can check the validity of the document on the state website <https://czo.gov.ua/verify>





HABAS SINAL VE TIRAZI GAZLAR ISTIHGAL ENDUSTRISI A.S.  
HABAS SINAL VE TIRAZI GAZLAR ISTIHGAL ENDUSTRISI A.S.  
TIRAZI GAZLAR ISTIHGAL ENDUSTRISI A.S.  
TIRAZI GAZLAR ISTIHGAL ENDUSTRISI A.S.

DOĞRULAN TYP  
TEST SERTİFİKATI  
IN 123456789

DOĞRULAN NO  
4.433

TARİH  
15.05.2024

ORGANİZASYON  
HABAS SINAL VE TIRAZI GAZLAR ISTIHGAL ENDUSTRISI A.S.

TESTERİN ADI  
MUSTAFA KAYA

TESTERİN İMZA  
MUSTAFA KAYA

TESTERİN MÜHÜR  
HABAS SINAL VE TIRAZI GAZLAR ISTIHGAL ENDUSTRISI A.S.

TESTERİN ADRESİ  
HABAS SINAL VE TIRAZI GAZLAR ISTIHGAL ENDUSTRISI A.S.

TESTERİN TELEFON NO  
0312 123 45 67 89

TESTERİN E-POSTA ADRESİ  
m.kaya@habas-sinal-trazi.com.tr

TESTERİN İMZA  
MUSTAFA KAYA

TESTERİN MÜHÜR  
HABAS SINAL VE TIRAZI GAZLAR ISTIHGAL ENDUSTRISI A.S.

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TESTERİN TELEFON NO  
0312 123 45 67 89

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SİPARİS NO

STANÇI TARİHİ

MÜSTAKİL NO

HABAS TIRAZI NO

DETAY

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# MILL TEST CERTIFICATE

THE INSPECTION CERTIFICATE ACCORDING TO EN10204 (2004) 3.1 CONFORMING TO THE DEFINITION IN EN 10168

CERTIFICATE NO : 889.526

ORDER NO : 236019

INVOICE NO : IHD20230000000036

2344 - CPR - 0118

EN 10025-1

Hot rolled structural steel products



2344

26.01.2023

PAGE : 1 OF 1

ORIGINAL

NAME OF THE MANUFACTURER :

ISIK ÇELİK SANAYİ VE TİCARET A.Ş. ZONGULDAK CAD. NO:38 78100 KARABUK TURKEY

NAME OF THE EXPORTER :

ISIK ÇELİK SANAYİ VE TİCARET A.Ş. ZONGULDAK CAD. NO:38 78100 KARABUK TURKEY

CUSTOMER :

SRL «BPM-TRADE» , MD 5401, REPUBLICA MOLDOVIA, CITY REZINA, STREET 27, AVGUSTA, 5,  
REGISTRATION NO: 1013605000319

DESCRIPTION OF GOODS :

PRIME, HOT ROLLED STEEL FLAT BARS, I BEAMS, H BEAMS

QUALITY :

S235JR - EN 10025-1:2004

PRODUCTION STANDARD :

EN EN 10025-2:2004 , DIN EN 10025-1:1995 , DIN EN 10025-1:1995

| PHYSICAL PROPERTIES |              |         |                      | MECHANICAL PROPERTIES       |              |            |               |                |         |            |                        |               |                | CHEMICAL COMPOSITION |               |   |                  |    |                  |    |                  |    |   |    |    |   |                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| HEAT NO             | PRODUCT NAME | SIZE MM | TOTAL QUANTITY IN MT | NUMBER OF PIECES PER BUNDLE | LENGTH METER | WORK ORDER | TENSION TEST  |                |         |            |                        |               | CHARPY TEST(1) |                      | BEND TEST (2) |   | RE-BEND TEST (2) |    | FATIGUE TEST (4) |    | PRODUCT ANALYSIS |    |   |    |    |   |                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                     |              |         |                      |                             |              |            | YIELD S. (Re) | TENSİLE S.(Rm) | Rm / Re | ELONGATION | TEST PIECES WIDTH (mm) | VALUE (JOULE) | C              | Si                   | Mn            | P | S                | Ti | Cu               | Ni | Cr               | Mo | V | Al | Nb | N | CARBON EQUIVALENT |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                     |              |         |                      |                             |              |            | N/mm2         |                |         |            | %                      |               |                |                      |               |   |                  |    |                  |    |                  |    |   |    |    |   |                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

1. WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED ABOVE HAS BEEN TESTED AND TEST RESULTS ARE IN COMPLIANCE WITH THE TERMS OF THE PURCHASE ORDER OR CONTRACT.

2. THE CERTIFICATE SHALL NOT BE REPRODUCE EXCEPT IN FULL WITHOUT THE WRITTEN APPROVAL OF THE COMPANY

3. MATERIAL FREE FROM MERCURY AND RADIATION CONTAMINATION.

NOTES:

(1) VALUES ARE FOR KV150, TEST TEMPERATURE=25 C

(2) "L" MEANS "LONGITUDINAL", "T" MEANS "TRANSVERSE"

(3) BEND & RE-BEND TESTS ARE ONLY RIBBED REINFORCING STEEL BARS

(4) NUMBER OF CYCLES x 1.000.000

ALL PRODUCTS HAVE BEEN INSPECTED BY "VITSAN INSPECTION COMPANY - LLOYDS AGENCY"



ISIK ÇELİK SANAYİ VE TİCARET A.Ş.  
QUALITY CONTROL DEPARTMENT





ArcelorMittal Hunedoara S.A.  
DJ 687, nr. 4, Cod 331111, Hunedoara-Romania

ArcelorMittal

CERTIFICAT DE INSPECTIE / INSPECTION CERTIFICATE  
SR EN 10204:2005 ( EN 10204:2004 ) 3.1

ArcelorMittal HUNEDOARA S.A:

Quality Inspection & Statistics  
Hunedoara-Romania Cod 331111

Destinatar / Destined to:

SC Thyssenkrupp Materials Romania

Nr. / No.:

1450083693

Data / Date

10.05.2023

Adresa/Address: b-dul Basarabel, 256, 030171, BUCURESTI

Tara/State: România

Comanda nr. / Order no.:

5104

Vagon/Wagon / Auto/Truck:

VL11VTU/VL12VTU

Standard de marca / Material norm: SR EN 10025-2:2019

Marcaj color:

DOP: AMHU-2/05 CPR-13-1

Observatii / Remarks:

| Incarcari mecanice/Mechanical tests |                       |                    |                     |                  |                                     |                                 |                                                                 |                      |                      |      |                                          |                  |                |                |                |                             |       |
|-------------------------------------|-----------------------|--------------------|---------------------|------------------|-------------------------------------|---------------------------------|-----------------------------------------------------------------|----------------------|----------------------|------|------------------------------------------|------------------|----------------|----------------|----------------|-----------------------------|-------|
| Nr.Crt /<br>No.Item                 | Nr.Sarja /<br>Heat No | Marca /<br>Quality | Produs /<br>Product | Buc. /<br>Pleces | Cantitate /<br>Quantity<br><br>(le) | Lungime /<br>Length<br><br>(mm) | Toleranta la<br>lungime /<br>Tolerance<br>To length<br><br>(mm) | ReH                  | Rm                   | A5   | Incovolare prin soc / Charpy impact test |                  |                |                |                |                             |       |
|                                     |                       |                    |                     |                  |                                     |                                 |                                                                 | [N/mm <sup>2</sup> ] | [N/mm <sup>2</sup> ] | [%]  | Tip epruveta /<br>Type of sample         | Temp<br><br>[°C] | KV1<br><br>[J] | KV2<br><br>[J] | KV3<br><br>[J] | Medie KV /<br>Average<br>KV |       |
| 1                                   | 71871                 | S275JO+M           | IPE200              | 9                | 2.449                               | 12100                           | -0 / +100                                                       | 313                  | 467                  | 33,0 | 300/7,5                                  | 0                | 100,0          | 108,0          | 112,0          |                             | 106,7 |
| 2                                   | 71856                 | S275JO+M           | IPE200              | 71               | 19.324                              | 12100                           | -0 / +100                                                       | 311                  | 461                  | 33,0 | 300/7,5                                  | 0                | 114,0          | 116,0          | 116,0          |                             | 115,3 |
| 3                                   | 71836                 | S275JO+M           | IPE200              | 1                | 0.272                               | 12100                           | -0 / +100                                                       | 336                  | 468                  | 33,0 | 300/7,5                                  | 0                | 110,0          | 114,0          | 104,0          |                             | 108,3 |

Compozitie chimica pe otel lichid/Chemical analysis of the liquid steel [%]

| Nr.crt /<br>No item | Nr.Sarja /<br>Heat No | C     | Mn    | Si    | S     | P     | Cr    | Ni    | Cu    | Mo    | Ti    | V     | Al    | Sn    | B      | Nb     | N      | O(ppm) | H(ppm) | CEV   |
|---------------------|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|-------|
| 1                   | 71871                 | 0,150 | 0,590 | 0,200 | 0,003 | 0,014 | 0,100 | 0,110 | 0,320 | 0,030 | 0,001 | 0,003 | 0,004 | 0,014 | 0,0002 | 0,0009 | 0,0112 |        |        | 0,304 |
| 2                   | 71856                 | 0,160 | 0,580 | 0,200 | 0,013 | 0,013 | 0,090 | 0,130 | 0,310 | 0,030 | 0,001 | 0,004 | 0,003 | 0,013 | 0,0003 | 0,0013 | 0,0090 |        |        | 0,311 |
| 3                   | 71836                 | 0,140 | 0,620 | 0,180 | 0,010 | 0,014 | 0,090 | 0,130 | 0,430 | 0,030 | 0,001 | 0,003 | 0,003 | 0,018 | 0,0002 | 0,0008 | 0,0108 |        |        | 0,305 |

Utilizare preconizata/Intended uses: Structuri metalice si/sau structuri mixte otel-beton/Metalic structures and/or mixed structures steel-concrete

Durabilitate/Durability: Compozitie chimica / Chemical analysis

Sudabilitate/Weldability: CEV

Substanta reglementata/Regulated substance: Performanta nedeterminata/No performance determined

Marcaj/Marked: SR EN 10025-1:2005 ( EN 10025-1:2004 )

Suprafata/Surface: SR EN 10163-3:2005, clasa C, subcl.1 ( EN 10163-3:2004 )

Dimensiuni/Dimension: SR EN 10365/2017; EN 10365/2017

Tol. la dim. si forma / Tolerances on dimension and shape: SR EN 10034/1995; EN 10034/1993

Materialul mai sus mentionat nu prezinta radioactivitate

The above mentioned material has not displayed any radioactivity

Inspectia Calitatii si Statistici/Quality Inspection & Statistics  
Quality Manager: Ileana Cristea Eng.

Intocmit/Elaborate:

CRISTIAN IOAN MICLEAN CIAPA

CE  
12/1823

ArcelorMittal Hunedoara S.A.  
DJ 687, nr. 4, Cod 331111, Hunedoara-Romania

ArcelorMittal

**CERTIFICAT DE INSPECTIE / INSPECTION CERTIFICATE**  
**SR EN 10204:2005 ( EN 10204:2004 ) 3.1**

ArcelorMittal HUNEDOARA S.A:

Quality Inspection & Statistics  
Hunedoara-Romania Cod 331111

Destinatar / Destined to:  
THYSSENKRUPP MATERIALS ROMANIA

Nr. / No.: 1450087769 Data / Date: 11.10.2023

Adresa/Address: BLV BASARABIA NR 256 FORJA PRESE, ETJ 1, 030352, SECTOR 3 BUCURESTI

Comanda nr. / Order no.: 5234 Comanda data / Order date: 03.10.2023

Vagon/Wagon / Auto/Truck:  
BC29TSU/BC20YTC

Standard de marca / Material norm: SR EN 10025-2:2019

Marcaj color:

DOP: AMHU-2/05 CPR-13-1

Observatii / Remarks:

| Nr.Crt /<br>No Item | Nr.Sarja /<br>Heat No | Marca /<br>Quality | Produs /<br>Product | Buc. /<br>Pieces | Cantitate /<br>Quantity | Lungime /<br>Length | Toleranta la<br>lungime /<br>Tolerance<br>To length | Incerari mecanice/Mechanical tests |                      |      |                                          |              |            |            |            |                             |
|---------------------|-----------------------|--------------------|---------------------|------------------|-------------------------|---------------------|-----------------------------------------------------|------------------------------------|----------------------|------|------------------------------------------|--------------|------------|------------|------------|-----------------------------|
|                     |                       |                    |                     |                  |                         |                     |                                                     | ReH                                | Rm                   | A5   | Incovolare prin soc / Charpy impact test |              |            |            |            |                             |
|                     |                       |                    |                     |                  |                         |                     |                                                     |                                    |                      |      | Tip epruveta /<br>Type of sample         | Temp<br>[°C] | KV1<br>[J] | KV2<br>[J] | KV3<br>[J] | Medie KV /<br>Average<br>KV |
|                     |                       |                    |                     |                  | [t]                     | [mm]                | [mm]                                                | [N/mm <sup>2</sup> ]               | [N/mm <sup>2</sup> ] | [%]  |                                          |              |            |            |            |                             |
| 1                   | 72695                 | S275JO+M           | IPE240              | 40               | 14.920                  | 12100               | -0 / +100                                           | 322                                | 471                  | 30,0 | 300/7,5                                  | 0            | 88,0       | 62,0       | 76,0       | 68,7                        |
| 2                   | 72675                 | S275JO+M           | IPE240              | 8                | 2.984                   | 12100               | -0 / +100                                           | 305                                | 450                  | 33,0 | 300/7,5                                  | 0            | 78,0       | 90,0       | 86,0       | 84,7                        |
| 3                   | 72668                 | S275JO+M           | IPE240              | 10               | 3.730                   | 12100               | -0 / +100                                           | 316                                | 449                  | 33,0 | 300/7,5                                  | 0            | 98,0       | 106,0      | 90,0       | 98,0                        |

**Compozitie chimica pe otel lichid/Chemical analysis of the liquid steel [%]**

| Nr.crt /<br>No Item | Nr.Sarja /<br>Heat No | C     | Mn    | Si    | S     | P     | Cr    | Ni    | Cu    | Mo    | Ti    | V     | Al    | Sn    | B      | Nb     | N      | O(ppm) | H(ppm) | CEV   |
|---------------------|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|-------|
| 1                   | 72695                 | 0,150 | 0,570 | 0,200 | 0,004 | 0,019 | 0,170 | 0,090 | 0,240 | 0,030 | 0,002 | 0,005 | 0,004 | 0,011 | 0,0004 | 0,0017 | 0,0085 |        |        | 0,308 |
| 2                   | 72675                 | 0,150 | 0,580 | 0,230 | 0,007 | 0,008 | 0,100 | 0,110 | 0,270 | 0,030 | 0,001 | 0,003 | 0,002 | 0,014 | 0,0001 | 0,0009 | 0,0115 |        |        | 0,299 |
| 3                   | 72668                 | 0,140 | 0,590 | 0,200 | 0,004 | 0,014 | 0,130 | 0,120 | 0,320 | 0,030 | 0,020 | 0,003 | 0,003 | 0,015 | 0,0002 | 0,0011 | 0,0086 |        |        | 0,300 |

Utilizare preconizata/Intended uses: Structuri metalice si/sau structuri mixte otel-beton/Metalic structures and/or mixed structures steel-concrete

Durabilitate/Durability: Compozitie chimica / Chemical analysis

Sudabilitate/Weldability: CEV

Substanta reglementata/Regulated substance: Performanta nedeterminata/No performance determined

Marcaj/Marked: SR EN 10025-1:2005 ( EN 10025-1:2004 )

Suprafata/Surface: SR EN 10163-3:2006, clasa C, subcl.1 ( EN 10163-3:2004 )

Dimensiuni/Dimension: SR EN 10365/2017; EN 10365/2017

Tol. la dim. si forma / Tolerances on dimension and shape: SR EN 10034/1995; EN 10034/1993

Materialul mai sus mentionat nu prezinta radioactivitate  
The above mentioned material has not displayed any radioactivity

Inspectia Calitatii si Statistici/Quality Inspection & Statistics  
Quality Manager:Ileana Cristea Eng.

Intocmit/Elaborate:

CRISTIAN IOAN MICLEAN CIAPA

CE  
12/1823







СЕРТИФІКАТ ЯКОСТІ / QUALITY CERTIFICATE  
№ 404 від 20.02.2023 / date 20.02.2023

| Виробник: Україна<br>ТЗ "Трубосталь" ПрАТ<br>тел. +38 (04142) 3-22-22<br>Producer: Ukraine, PJSC "Trubostal pipe plant"<br>11500, Zhitomir region, Korosten, Shatryshanska Str., 65<br>tel. +38 (04142) 3-22-22 |                |                            |                                                                                                                                                |                        |                   |                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------------|-----------------------------------|
| Замовник / Customer<br>Мегівест-СМЦ<br>Країна призначення: Україна<br>Україна                                                                                                                                   |                |                            | Замовлення № / Order 112500000027<br>Контракт № / Contract МЗК-1327342/10/20/СМЦ-С від 06.10.2020р.<br>Спец. № / Spec. № 1778 від 26.01.2023р. |                        |                   |                                   |
| Машини № / Carriage № A17498MI / A14875XF<br>ТТН № 217                                                                                                                                                          |                |                            | Доповнення до контракту / Supplement to Contract                                                                                               |                        |                   |                                   |
| Вид вантажмісця - пакети<br>Type of packages bundles                                                                                                                                                            |                |                            | Кількість місць / Quality of packages<br>7                                                                                                     |                        |                   |                                   |
| Найменування продукції / Description of goods                                                                                                                                                                   |                |                            | Стандарт / Standart                                                                                                                            |                        |                   |                                   |
| Труба профільна стальна /<br>Electrowelded profile steel pipe                                                                                                                                                   |                |                            | ДСТУ Б В.2.6-8-95 (ГОСТ 30245-94), ГОСТ 8639,<br>ГОСТ 8645, ГОСТ 13663                                                                         |                        |                   |                                   |
| Номер пакета<br>Lot number                                                                                                                                                                                      | Плавка<br>Heat | Марка сталі<br>Steel grade | Розміри, мм<br>Dimensions, mm                                                                                                                  |                        |                   | Вара нетто кг /<br>Weight net, kg |
|                                                                                                                                                                                                                 |                |                            | Діаметр<br>O.D. or I.D.                                                                                                                        | Товщина стінки<br>W.T. | Довжина<br>Length |                                   |
| 02-128/23                                                                                                                                                                                                       | 723042         | Ст 3пс                     | 100x100                                                                                                                                        | 3                      | 12000             | 3 250                             |
| 02-138/23                                                                                                                                                                                                       | 723042         | Ст 3пс                     | 100x100                                                                                                                                        | 3                      | 12000             | 3 155                             |
| 02-140/23                                                                                                                                                                                                       | 723042         | Ст 3пс                     | 100x100                                                                                                                                        | 3                      | 12000             | 3 130                             |
| 02-141/23                                                                                                                                                                                                       | 723042         | Ст 3пс                     | 100x100                                                                                                                                        | 3                      | 12000             | 3 150                             |
| 02-142/23                                                                                                                                                                                                       | 723042         | Ст 3пс                     | 100x100                                                                                                                                        | 3                      | 12000             | 3 160                             |
| 02-149/23                                                                                                                                                                                                       | 723042         | Ст 3пс                     | 100x100                                                                                                                                        | 3                      | 12000             | 3 195                             |
| 02-150/23                                                                                                                                                                                                       | 723042         | Ст 3пс                     | 100x100                                                                                                                                        | 3                      | 12000             | 3 190                             |
| Всього:                                                                                                                                                                                                         |                |                            |                                                                                                                                                |                        |                   | 22 230                            |





Сертифікат якості /  
Inspection certificate № 404 від 20.02.2023 / date 20.02.2023



### Результати випробувань / Test results

Зразки для випробувань виготовлені з готової продукції і випробувані при температурі 20 ° C  
Samples for testing are made of finished products and tested at a temperat 20 ° C

| Марка сталі<br>Steel grade | № плавки<br>Heat | Хімічний склад / масова частка елементів<br>Chemical compound / mass fraction of elements |    |    |    |    |    |    |    | Механічні властивості<br>Mechanical properties                          |                                                           |                                      |                                                |
|----------------------------|------------------|-------------------------------------------------------------------------------------------|----|----|----|----|----|----|----|-------------------------------------------------------------------------|-----------------------------------------------------------|--------------------------------------|------------------------------------------------|
|                            |                  | C                                                                                         | Mn | Si | S  | P  | Cr | Ni | Cu | Межа пружності<br>Yield strength, N/mm <sup>2</sup> , Rp <sub>0.2</sub> | Межа міцності<br>Tensile strength, N/mm <sup>2</sup> , Rm | Відносне подовження<br>Elongation, % | Гідровипробування<br>Hydro pressure, bar 3 sec |
| Ст 3пс                     | 723042           | 17                                                                                        | 42 | 2  | 50 | 24 | 5  | 1  | 1  | 455                                                                     | 28                                                        |                                      |                                                |

#### Примітка:

Note:

- Візуальний контроль без зауважень.  
Visual inspections - without remarks.
- Розміри труб в межах допуску.  
Pipe dimensions within tolerance limits in accordance.
- Технологічні випробування без зауважень.  
Technological tests - without remarks.
- 100% неруйнівний контроль труб проведено у відповідності з вимогами EN 10219-1, п.9.4.  
100% non-destructive pipe inspection is done in accordance with demands of EN 10219-1, п.9.4.  
Неруйнівний контроль проведено з задовільним результатом.  
Not destructive testing was performed with satisfactory result.

Зазначена в цьому документі продукція відповідає за якістю умовам контракту.

It is hereby certify that the quality of the pipes mentioned in this document is in conformity with the terms and conditions.  
Внесення змін до сертифіката, а також використання даного сертифіката в інших цілях заборонено і тягне за собою кримінальну відповідальність.

Introduction of any changes into certificate as well as using of the present certificate in other purposes is forbidden and entail criminal responsibility.

Підпис експерта служби технічного контролю  
Technical department signature

Підпис експерта служби з неруйнівного контролю  
Nondestructive control signature





СЕРТИФИКАТ ЯКОСТІ № 5-531/2

ТОВ "ДМЗ КОМІНЕТ"  
Виробник: 48123, м. Дніпро, вул. Яхненська, 7

Дата: 08.03.2023

Машина № BA8923EP

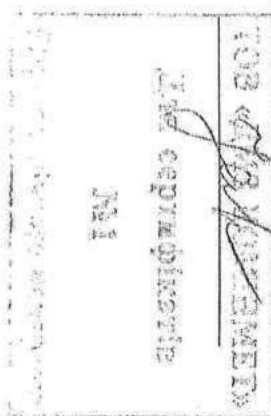
Вантажодержувач: ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ "МЕТІНВЕСТ-СМЛ"

Заказ № 08/154-2022  
000002334

| № пакета                                                      | № партії | Серія | Масова частка | № пачатку | Розмір, мм |         |         | Маса, т | Кількість, шт. | Метраж, м | Хімічний склад, % |    |     |    |    |    | Механічні властивості |                |                     |                |               |       | Технологічні властивості |                    |      |                  |                   |                  |                   |
|---------------------------------------------------------------|----------|-------|---------------|-----------|------------|---------|---------|---------|----------------|-----------|-------------------|----|-----|----|----|----|-----------------------|----------------|---------------------|----------------|---------------|-------|--------------------------|--------------------|------|------------------|-------------------|------------------|-------------------|
|                                                               |          |       |               |           | Довжина    | Товщина | Діаметр |         |                |           | C                 | Mn | Si  | S  | P  | Ca | Говірка, мм/м2        | Говірка, мм/м2 | Віднос. міцність, % | Говірка, мм/м2 | Міцність, МПа |       |                          | Розтягн. довж., мм | Згин | Нерівн. пок., мм | Віднос. втрата, % | Нерівн. пок., мм | Віднос. втрата, % |
|                                                               |          |       |               |           |            |         |         |         |                |           |                   |    |     |    |    |    |                       |                |                     |                | Довж.         | Діам. | Довж.                    |                    |      |                  |                   |                  |                   |
| Найменування продукції: Труби сталеві електрозварні профільні |          |       |               |           |            |         |         |         |                |           |                   |    |     |    |    |    |                       |                |                     |                |               |       |                          |                    |      |                  |                   |                  |                   |
| 407568781                                                     | 52129    | B     | ЗПС           | 1213078   | 120x120    | 4       | 12      | 3.632   | 20             | 240       | 16                | 43 | 1.9 | 25 | 17 |    | 436/441               |                |                     | 34/35          |               |       |                          |                    |      |                  |                   |                  | 100               |
| 407568771                                                     | 52129    | B     | ЗПС           | 1213078   | 120x120    | 4       | 12      | 3.632   | 20             | 240       | 16                | 43 | 1.9 | 25 | 17 |    | 436/441               |                |                     | 34/35          |               |       |                          |                    |      |                  |                   |                  | 100               |
| 405569051                                                     | 52119    | B     | ЗПС           | 813911    | 120x60     | 3       | 12      | 4.015   | 40             | 480       | 13                | 39 | 1.6 | 39 | 19 |    | 417/428               |                |                     | 37/38          |               |       |                          |                    |      |                  |                   |                  | 100               |
| 405569471                                                     | 52093    | B     | ЗПС           | 833031    | 120x60     | 4       | 12      | 4.597   | 36             | 432       | 17                | 41 | 2.1 | 37 | 40 |    | 402/407               |                |                     | 36/36          |               |       |                          |                    |      |                  |                   |                  | 100               |
| Загальна маса пакетів: 15.992 т.                              |          |       |               |           |            |         |         |         |                |           |                   |    |     |    |    |    |                       |                |                     |                |               |       |                          |                    |      |                  |                   |                  |                   |
| Кількість пакетів: 4 шт.                                      |          |       |               |           |            |         |         |         |                |           |                   |    |     |    |    |    |                       |                |                     |                |               |       |                          |                    |      |                  |                   |                  |                   |

Важливо: у сертифікаті проведено зазначеною точністю вимірювання, без термообробки, якісного випробовування за допомогою з'ясування цілості та відповідності до умови нормативних документів. Копія цього документа є частиною протоколу з застосуванням методів статистичного контролю на 5% труб (але не менше ніж 5 труб від партії). Невідповідність контролю зазначеної інформації, та за всіма параметрами труб, метод ЕТ, впровадження 3 пачки, якісні показники на № партії.

Підпис експерта  
Ірина Костюк





# TEST REPORT

No. 23-06599 to document No. SHPV359936  
According to EN 10204/ 2.2

Cold formed welded structural hollow sections of non-alloy and fine grain steels

**technical conditions: EN 10219-1**

steel grade: 50C EN 10219-S235JRH

size:

additional conditions:



## TECHNICAL CHARACTERISTICS

| TECHNICAL CHARACTERISTICS |        |               |             |                  |              |                |    |               |                     |        |
|---------------------------|--------|---------------|-------------|------------------|--------------|----------------|----|---------------|---------------------|--------|
| Heat                      |        | Bundle<br>No. | Steel grade | Dimensions<br>mm | Length<br>mm | Tolerance (mm) |    | Weight<br>ton | Number pipes<br>pcs | Meters |
| No.                       | No.    |               |             |                  |              | -              | +  |               |                     |        |
| 1.                        | 221544 | 23-1118       | -           | 100x100x5.0      | 12000        | 0              | 50 | 1,556         | 9                   | 108    |
| 2.                        | 221544 | 23-1119       | -           | 100x100x5.0      | 12000        | 0              | 50 | 1,556         | 9                   | 108    |
| 3.                        | 221543 | 23-1132       | -           | 100x100x5.0      | 12000        | 0              | 50 | 1,556         | 9                   | 108    |
| 4.                        | 221543 | 23-1133       | -           | 100x100x5.0      | 12000        | 0              | 50 | 1,556         | 9                   | 108    |
| 5.                        | 221545 | 23-1390       | -           | 120x120x5.0      | 12000        | 0              | 50 | 1,895         | 9                   | 108    |
| 6.                        | 221543 | 23-1268       | -           | 140x140x5.0      | 12000        | 0              | 50 | 1,490         | 6                   | 72     |
| 7.                        | 221544 | 23-1267       | -           | 140x140x5.0      | 12000        | 0              | 50 | 1,490         | 6                   | 72     |
| 8.                        | 221544 | 23-1298       | -           | 140x140x5.0      | 12000        | 0              | 50 | 1,490         | 6                   | 72     |
| 9.                        | 221544 | 23-1299       | -           | 140x140x5.0      | 12000        | 0              | 50 | 1,490         | 6                   | 72     |
| 10.                       | 221543 | 23-1296       | -           | 140x140x5.0      | 12000        | 0              | 50 | 1,490         | 6                   | 72     |
|                           |        |               |             |                  |              |                |    | 15,568        | 75                  | 900,00 |

## MECHANICAL PROPERTIES

| No. | Heat   | Bundle  |  | CHEMICAL PROPERTIES % |      |       |       |       |       |       |                    |                        |                       | MECHANICAL PROPERTIES |              |         |
|-----|--------|---------|--|-----------------------|------|-------|-------|-------|-------|-------|--------------------|------------------------|-----------------------|-----------------------|--------------|---------|
|     |        | No.     |  | C                     | Mn   | Si    | P     | S     | N     | Al    | Yield point<br>ReH | Tensile<br>strength Rm | Spec.<br>elongation A | CEV %                 | Roughness Ra | Density |
| 1.  | 221544 | 23-1118 |  | 0,16                  | 0,6  | 0,029 | 0,016 | 0,008 | 0,004 | 0,045 | 305                | 412                    | 24                    | 0                     | 0            |         |
| 2.  | 221544 | 23-1119 |  | 0,16                  | 0,6  | 0,029 | 0,016 | 0,008 | 0,004 | 0,045 | 305                | 412                    | 24                    | 0                     | 0            |         |
| 3.  | 221543 | 23-1132 |  | 0,16                  | 0,69 | 0,03  | 0,015 | 0,006 | 0,004 | 0,068 | 320                | 414                    | 24                    | 0                     | 0            |         |
| 4.  | 221543 | 23-1133 |  | 0,16                  | 0,69 | 0,03  | 0,015 | 0,006 | 0,004 | 0,068 | 320                | 414                    | 24                    | 0                     | 0            |         |
| 5.  | 221545 | 23-1390 |  | 0,15                  | 0,61 | 0,03  | 0,015 | 0,007 | 0,004 | 0,056 | 315                | 413                    | 24                    | 0,26                  | 0            |         |
| 6.  | 221543 | 23-1268 |  | 0,16                  | 0,69 | 0,03  | 0,015 | 0,006 | 0,004 | 0,068 | 320                | 414                    | 24                    | 0                     | 0            |         |
| 7.  | 221544 | 23-1267 |  | 0,16                  | 0,6  | 0,029 | 0,016 | 0,008 | 0,004 | 0,045 | 305                | 412                    | 24                    | 0                     | 0            |         |
| 8.  | 221544 | 23-1298 |  | 0,16                  | 0,6  | 0,029 | 0,016 | 0,008 | 0,004 | 0,045 | 305                | 412                    | 24                    | 0                     | 0            |         |
| 9.  | 221544 | 23-1299 |  | 0,16                  | 0,6  | 0,029 | 0,016 | 0,008 | 0,004 | 0,045 | 305                | 412                    | 24                    | 0                     | 0            |         |
| 10. | 221544 | 23-1299 |  | 0,16                  | 0,69 | 0,03  | 0,015 | 0,006 | 0,004 | 0,068 | 320                | 414                    | 24                    | 0                     | 0            |         |

## TECHNOLOGICAL TEST

| TECHNOLOGICAL TEST |         | Non-destructive test |                 |
|--------------------|---------|----------------------|-----------------|
| Test               | Bending | Flattening           | Drift expanding |
|                    |         |                      |                 |

1938-CPR-037511 05 23 /

urking

urking

Claims accepted if the product is in the condition in which purchased!

Claims accepted if the product is in the condition is

**Application:** To be used in metal structures.

In accordance with Declaration of performance: № 002-CPR-OP03-00.02 / 28.04.2023



Quality department: M. Hristova

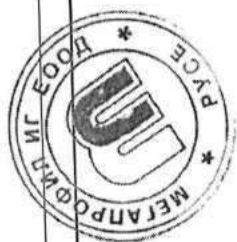
Signature:



Stamp:

Effective from 15.04.2014

ΦM 03-07



СЕРТИФИКАТ ИСПЫТАНИЙ №698 от 8 ноября 2023 г.

INSPECTION CERTIFICATE №698  
(EN 10204-3.1)

| Производитель:<br>Producer:                                                                                                           |                           | ООО "ВЕК"/LLC "VEK"<br>3200, Бендеры, Молдова<br>ул. Дзержинского 4-А<br>Str. Dzerzhinsky, 4-A. 3200, Bendery, Moldova<br>Telefon: +373 522 2-09-05;<br>Fax: +373 522 2-09-05<br>E-mail: export@vek-pmr.com<br>http://www.vek-pmr.com |                               | Контракт<br>Contract                                                                                                                                                                       | №7                             | Дата<br>Date                                       | 18.06.2018                               |                                          |                   |              |
|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|----------------------------------------------------|------------------------------------------|------------------------------------------|-------------------|--------------|
| Потребитель, адрес, страна:<br>Consumer, address, country:                                                                            |                           | Грузополучатель,<br>Адрес, страна<br>BPM-TRADE SRL or. Rezina,<br>str. 27 August.5<br>Пункт разгрузки:<br>mun.Chisinau, str. Uzinelor 78                                                                                              |                               | Дополнение к контракту:<br>Addendum to the contract:                                                                                                                                       |                                | Спецификация №77 от 13.10.2023, №78 от 24.10.2023г |                                          |                                          |                   |              |
| Дата отгрузки<br>Chip Data                                                                                                            |                           | 8 ноября 2023 г.                                                                                                                                                                                                                      |                               | Заказ №<br>Order                                                                                                                                                                           |                                | Дата<br>Date                                       |                                          |                                          |                   |              |
| Машина №<br>Carriage                                                                                                                  |                           | A 596 HK / AAB 504                                                                                                                                                                                                                    |                               |                                                                                                                                                                                            |                                |                                                    |                                          |                                          |                   |              |
| Наименование продукции<br>Discription of goods                                                                                        |                           |                                                                                                                                                                                                                                       |                               | Стандарт<br>Standart                                                                                                                                                                       | Вид груз.м.<br>Type of package | Кол-во мест<br>Quantity of packages                |                                          |                                          |                   |              |
| Полые сварные профили (квадратные, прямоугольные) из<br>конструкционных сталей S235JRH длина 6,0 м (100% мера) DIN<br>EN 10219-1:2006 |                           |                                                                                                                                                                                                                                       |                               | DIN EN<br>10219-<br>1:2006                                                                                                                                                                 | Bundles                        | 17                                                 |                                          |                                          |                   |              |
| Маркировка на бирке:<br>Marking on bundle tag:                                                                                        |                           |                                                                                                                                                                                                                                       |                               | завод, стандарт, марка стали, размеры, длина, № пакета, № партии, количество, вес пакета.<br>plant, standart, stell grade, dimensions, length, package №, lot №, quantity, package weight. |                                |                                                    |                                          |                                          |                   |              |
| Номер<br>партии<br>Lot №                                                                                                              | Номер<br>плавки<br>Heat № | Марка<br>стали<br>Stell grade                                                                                                                                                                                                         | Размеры, мм<br>Dimensions, mm |                                                                                                                                                                                            |                                | Кол-во<br>штук<br>Q-ty, pcs                        | Кол-во<br>метров<br>Q-ty of<br>meters, m | Кол-во<br>пакетов<br>Q-ty of<br>packages | Масса, тн Mass, t |              |
|                                                                                                                                       |                           |                                                                                                                                                                                                                                       | Размеры<br>O.D. of I.D.       | Толщина стенки<br>W.T.                                                                                                                                                                     | Длина, м<br>Length, m          |                                                    |                                          |                                          | Брутто<br>Gross   | Нетто<br>Net |
| СП-23-061123                                                                                                                          | 813203-2                  | S235JRH                                                                                                                                                                                                                               | 40x40                         | 3,0                                                                                                                                                                                        | 6                              | 100                                                | 600                                      | 1                                        | 1,874             | 1,869        |
| СП-01-071123                                                                                                                          | 523377                    | S235JRH                                                                                                                                                                                                                               | 40x40                         | 3,0                                                                                                                                                                                        | 6                              | 100                                                | 600                                      | 1                                        | 1,86              | 1,855        |
| СП-02-071123                                                                                                                          | 523377                    | S235JRH                                                                                                                                                                                                                               | 40x40                         | 3,0                                                                                                                                                                                        | 6                              | 100                                                | 600                                      | 1                                        | 1,87              | 1,865        |
| СП-18-061123                                                                                                                          | 813203-2                  | S235JRH                                                                                                                                                                                                                               | 40x40                         | 3,0                                                                                                                                                                                        | 6                              | 100                                                | 600                                      | 1                                        | 1,925             | 1,92         |
| СП-04-071123                                                                                                                          | 523377                    | S235JRH                                                                                                                                                                                                                               | 40x40                         | 3,0                                                                                                                                                                                        | 6                              | 100                                                | 600                                      | 1                                        | 1,921             | 1,916        |
| СП-22-031123                                                                                                                          | 1013342                   | S235JRH                                                                                                                                                                                                                               | 25x25                         | 2,0                                                                                                                                                                                        | 6                              | 144                                                | 864                                      | 1                                        | 1,18              | 1,175        |
| СП-21-031123                                                                                                                          | 1013342                   | S235JRH                                                                                                                                                                                                                               | 25x25                         | 2,0                                                                                                                                                                                        | 6                              | 144                                                | 864                                      | 1                                        | 1,174             | 1,169        |
| СП-20-031123                                                                                                                          | 1013342                   | S235JRH                                                                                                                                                                                                                               | 25x25                         | 2,0                                                                                                                                                                                        | 6                              | 144                                                | 864                                      | 1                                        | 1,202             | 1,197        |
| СП-19-031123                                                                                                                          | 1013342                   | S235JRH                                                                                                                                                                                                                               | 25x25                         | 2,0                                                                                                                                                                                        | 6                              | 144                                                | 864                                      | 1                                        | 1,182             | 1,177        |
| СП-02-031123                                                                                                                          | 1013342                   | S235JRH                                                                                                                                                                                                                               | 25x25                         | 2,0                                                                                                                                                                                        | 6                              | 144                                                | 864                                      | 1                                        | 1,253             | 1,248        |
| СП-01-031123                                                                                                                          | 1013342                   | S235JRH                                                                                                                                                                                                                               | 25x25                         | 2,0                                                                                                                                                                                        | 6                              | 144                                                | 864                                      | 1                                        | 1,251             | 1,246        |
| СП-19-021123                                                                                                                          | 613453-9                  | S235JRH                                                                                                                                                                                                                               | 25x25                         | 2,0                                                                                                                                                                                        | 6                              | 144                                                | 864                                      | 1                                        | 1,208             | 1,203        |
| СП-18-021123                                                                                                                          | 613453-9                  | S235JRH                                                                                                                                                                                                                               | 25x25                         | 2,0                                                                                                                                                                                        | 6                              | 144                                                | 864                                      | 1                                        | 1,25              | 1,245        |
| СП-17-021123                                                                                                                          | 132883                    | S235JRH                                                                                                                                                                                                                               | 40x40                         | 2,0                                                                                                                                                                                        | 6                              | 100                                                | 600                                      | 1                                        | 1,383             | 1,378        |
| СП-18-021123                                                                                                                          | 132883                    | S235JRH                                                                                                                                                                                                                               | 40x40                         | 2,0                                                                                                                                                                                        | 6                              | 100                                                | 600                                      | 1                                        | 1,396             | 1,391        |
| СП-28-011123                                                                                                                          | 132883                    | S235JRH                                                                                                                                                                                                                               | 40x40                         | 2,0                                                                                                                                                                                        | 6                              | 100                                                | 600                                      | 1                                        | 1,384             | 1,379        |
| СП-29-011123                                                                                                                          | 132883                    | S235JRH                                                                                                                                                                                                                               | 40x40                         | 2,0                                                                                                                                                                                        | 6                              | 100                                                | 600                                      | 1                                        | 1,39              | 1,385        |
| Итого:                                                                                                                                |                           |                                                                                                                                                                                                                                       |                               |                                                                                                                                                                                            |                                | 2 052                                              | 12 312                                   | 17                                       | 24,703            | 24,611       |

Продолжение на обороте

стр. 1 из 2 / page 1 of 2







СЕРТИФИКАТ ИСПЫТАНИЙ 698 от 8 ноября 2023 г.  
INSPECTION CERTIFICATE 698  
(EN 10204-3.1)

| Результаты испытаний                                  |                                                        |            |            |            |            |            |            |            |             |             |           | Тест result                                                |                                                                 |                                      |       |
|-------------------------------------------------------|--------------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|-----------|------------------------------------------------------------|-----------------------------------------------------------------|--------------------------------------|-------|
| Химический состав стали<br>Chemical steel composition |                                                        |            |            |            |            |            |            |            |             |             |           | Механические свойства<br>Mechanical properties             |                                                                 |                                      |       |
| Номер<br>плавки<br>Heat №                             | Массовая доля элементов, %<br>Element mass fraction, % |            |            |            |            |            |            |            |             |             |           | Предел<br>текучести<br>Yield<br>point<br>N/mm <sup>2</sup> | Предел<br>прочности<br>Tensile<br>strength<br>N/mm <sup>2</sup> | Удлинен<br>ие<br>Elongatio<br>n<br>% | Изгиб |
|                                                       | C<br>x100                                              | Mn<br>x100 | Si<br>x100 | S<br>x1000 | P<br>x1000 | Cr<br>x100 | Ni<br>x100 | Cu<br>x100 | N2<br>x1000 | CEV<br>x100 | V<br>x100 |                                                            |                                                                 |                                      |       |
| 813203-2                                              | 12                                                     | 41         | 1,3        | 34         | 26         | 6          | 2          | 2          | 9           | 0,204       | 2         | 299                                                        | 422                                                             | 35                                   | уд    |
| 523377                                                | 16                                                     | 39         | 1,7        | 23         | 13         | 4          | 1          | 1          | 9           | 0,236       | 3         | 289                                                        | 417                                                             | 34                                   | уд    |
| 1013342                                               | 11                                                     | 37         | 1,3        | 25         | 29         | 5          | 1          | 1          | 9           | 0,184       | 2         | 279                                                        | 422                                                             | 34                                   | уд    |
| 613453-9                                              | 11                                                     | 40         | 1,5        | 25         | 22         | 5          | 1          | 1          | 9           | 0,189       | 2         | 299                                                        | 422                                                             | 28                                   | уд    |
| 132883                                                | 13                                                     | 46         | 1,5        | 26         | 17         | 3          | 1          | 2          | 9           | 0,215       | 2         | 299                                                        | 427                                                             | 33                                   | уд    |
| 132883                                                | 13                                                     | 46         | 1,5        | 26         | 17         | 3          | 1          | 2          | 9           | 0,215       | 2         | 333                                                        | 422                                                             | 29                                   | уд    |
|                                                       |                                                        |            |            |            |            |            |            |            |             |             |           |                                                            |                                                                 |                                      |       |
|                                                       |                                                        |            |            |            |            |            |            |            |             |             |           |                                                            |                                                                 |                                      |       |
|                                                       |                                                        |            |            |            |            |            |            |            |             |             |           |                                                            |                                                                 |                                      |       |
|                                                       |                                                        |            |            |            |            |            |            |            |             |             |           |                                                            |                                                                 |                                      |       |
|                                                       |                                                        |            |            |            |            |            |            |            |             |             |           |                                                            |                                                                 |                                      |       |

Примечание:  
Note:

- Визуальный контроль маркировка и упаковка без замечаний.  
Visual inspection marking and packing-without remarks.
- Размеры в пределах допусков.  
Dimensions within the tolerance limits
- 100% неразрушающий контроль проведен в соответствии с требованиями EN ISO 10893-2 класс E4.  
Неразрушающий контроль проведен с удовлетворительным результатом.  
100% nondestructive test is done according EN ISO 10893-2 class E4. Nondestructive test OK.
- Продукция отпускается по фактическому весу  
Products are dispensed according to actual weight
- Страна происхождения товара: Республика Молдова.  
Country of origin: Republic of Moldova.
- Завод подтверждает и гарантирует, что при изготовлении продукции не использовалось сырье и материалы происхождения из РФ.  
The plant confirms and guarantees that no raw materials originating from the Russian Federation were used in the manufacture of products.
- Метод производства: порезка с последующей сваркой.  
Production method: cutting of steel coils and strips welding.

Указанная в настоящем документе продукция соответствует по качеству условиям контракта.  
Those in this paper products is equal to the quality terms of the contract.  
Declaration of quality properties № S235JRH-CPR-01  
see in the Site :[www.vek-pmr.com/p0036.htm](http://www.vek-pmr.com/p0036.htm)

Подпись и штамп  
эксперта  
Signature and stamp  
expert



17 0090

DoP Nr.: S235JRH-CPR-01



Стр. 2 из 2 / page 2 of 2



TEST REPORT: 2.2 EN 10204:2004  
- izveštaj o ispitivanju

PAGE No: 1  
(strana br):

PURCHASER: INTERCOM GROUP LTD  
(kupac) VARNA CERTIFICATE No 81393  
MLADOST AREA, WEST INDUSTRIAL ZONE 11, ENG (uverenje broj)  
TRADING CO: INTERCOM GROUP LTD  
(izvoznik) VARNA PURCHASE ORDER  
(primalac) MLADOST AREA, WEST INDUSTRIAL ZONE 11, ENG ITEM:  
PRODUCT: HOT ROLLED COILS  
(proizvod) CONTRACT No. INGR2092BG  
DIMENSIONS: 4,000 X 1500 X (ugovor broj)  
(dimenzije, mm) EN 10051/2010  
QUALITY: S235JR+AR T: HR+CE  
(kvalitet) EN 10025-2/2019 DATE OF ISSUE 17/09/2022  
Net weight(kg): 39900 (dat.izdavanja)  
DELIVERY CONDITIONS : AR  
(STANJE ISPORUKE) Transport: 560 EX 30061

!-----!  
! MECHANICAL PROPERTIES - MEH.TEH.OSOBINE !  
! COIL No, !Heat No!-----!  
! PACK No, ! ! ! ! ! Impact test !Bend ! Hardness !Melt !  
!(kotur br.!Šarža !Re !Rm !Re/ !A ! KV2 !test ! (tvrdoća)!furn !  
! paket br)! ! ! ! Rm !Elo! (žilavost) ! ! ! !  
! ! ! ! ! !ng.!Sr.Vr. ! 1 2 3 ! S ! !nacin!  
! ! !MPa!MPa! !---!-----!-----!-----!Proiz!  
! ! ! ! ! ! % ! J T°C ! J J J ! 180° ! HRB HV10 !  
!-----!

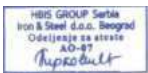
! 2G33005 886489 322 413 ,78 30 Y !  
! 2G33006 886489 322 413 ,78 30 Y !  
! 2G34013 886489 322 413 ,78 30 Y !  
!  
!  
!

! CHEMICAL COMPOSITION OF HEAT - HEMIJSKI SASTAV SARZE (%) !  
!

! 886489 !  
! ----- !  
! C 0,08 !  
! Mn 0,50 !  
! Si 0,010 !  
! P 0,014 !  
! S 0,018 !  
! Al 0,038 !  
! Cu 0,13 !  
! Cr 0,04 !  
! Ni 0,03 !  
! Mo 0,006 !  
! Ti 0,001 !  
! V 0,001 !  
! Nb 0,001 !  
! N 0,006 !  
! B <0,0001 !  
! CEV 0,19 !  
!

Measured values of alpha and beta/gamma surface contamination of the examined goods are for alpha emitters lower than 4 Bq/100cm<sup>2</sup>, as well as for beta/gamma emitters lower than 40 Bq/100cm<sup>2</sup>  
We hereby declare that above mentioned products were manufactured in accordance with specifications and contract requirements.  
Statement of compliance with the order, with indication of results of non-specific inspection

Document is valid without signature and stamp. QUALITY ASSURANCE  
OBEZBEDJENJE KVALITETA



| ArcelorMittal Hunedoara S.A.<br>DJ 687, nr. 4, Cod 331111, Hunedoara-Romania                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                    |                     |                  |                                 |                             |                                                             |                                    |                      |                                                                                                     |                                          |              |            |            |                                                 |                             |        |        |        |                                                                             |                       |                    |                     |                  |                                 |                             |                                                             |                                    |  |  |  |  |  |  |  |  |  |     |    |                     |                                          |   |    |    |   |                             |                      |                      |     |                                  |              |            |            |            |   |       |          |        |        |       |       |           |       |       |       |        |       |       |       |       |       |       |       |       |       |        |        |        |  |  |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------|---------------------|------------------|---------------------------------|-----------------------------|-------------------------------------------------------------|------------------------------------|----------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------|--------------|------------|------------|-------------------------------------------------|-----------------------------|--------|--------|--------|-----------------------------------------------------------------------------|-----------------------|--------------------|---------------------|------------------|---------------------------------|-----------------------------|-------------------------------------------------------------|------------------------------------|--|--|--|--|--|--|--|--|--|-----|----|---------------------|------------------------------------------|---|----|----|---|-----------------------------|----------------------|----------------------|-----|----------------------------------|--------------|------------|------------|------------|---|-------|----------|--------|--------|-------|-------|-----------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--|--|-------|
| <b>CERTIFICAT DE INSPECTIE / INSPECTION CERTIFICATE</b><br><b>SR EN 10204:2005 ( EN 10204:2004 ) 3.1</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                       |                    |                     |                  |                                 |                             |                                                             |                                    |                      | ArcelorMittal HUNEDOARA S.A:<br><br>Quality Inspection & Statistics<br>Hunedoara-Romania Cod 331111 |                                          |              |            |            |                                                 |                             |        |        |        |                                                                             |                       |                    |                     |                  |                                 |                             |                                                             |                                    |  |  |  |  |  |  |  |  |  |     |    |                     |                                          |   |    |    |   |                             |                      |                      |     |                                  |              |            |            |            |   |       |          |        |        |       |       |           |       |       |       |        |       |       |       |       |       |       |       |       |       |        |        |        |  |  |       |
| Destinatar / Destined to:<br><b>SC Thyssenkrupp Materials Romania</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |                    |                     |                  |                                 |                             |                                                             |                                    |                      | Nr. / No.:<br><b>1450987966</b>                                                                     |                                          |              |            |            | Data / Date<br><b>19.10.2023</b>                |                             |        |        |        |                                                                             |                       |                    |                     |                  |                                 |                             |                                                             |                                    |  |  |  |  |  |  |  |  |  |     |    |                     |                                          |   |    |    |   |                             |                      |                      |     |                                  |              |            |            |            |   |       |          |        |        |       |       |           |       |       |       |        |       |       |       |       |       |       |       |       |       |        |        |        |  |  |       |
| Adresa/Address: b-dul Basarabiei, 256, 030171, BUCURESTI<br>Tara/State: Romania                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                       |                    |                     |                  |                                 |                             |                                                             |                                    |                      | Comanda nr. / Order no.:<br><b>5201</b>                                                             |                                          |              |            |            | Comanda data / Order date:<br><b>24.08.2023</b> |                             |        |        |        |                                                                             |                       |                    |                     |                  |                                 |                             |                                                             |                                    |  |  |  |  |  |  |  |  |  |     |    |                     |                                          |   |    |    |   |                             |                      |                      |     |                                  |              |            |            |            |   |       |          |        |        |       |       |           |       |       |       |        |       |       |       |       |       |       |       |       |       |        |        |        |  |  |       |
| Vagon/Wagon / Auto/Truck:<br><b>AG03NTT/AG04NTT</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                       |                    |                     |                  |                                 |                             |                                                             |                                    |                      |                                                                                                     |                                          |              |            |            |                                                 |                             |        |        |        |                                                                             |                       |                    |                     |                  |                                 |                             |                                                             |                                    |  |  |  |  |  |  |  |  |  |     |    |                     |                                          |   |    |    |   |                             |                      |                      |     |                                  |              |            |            |            |   |       |          |        |        |       |       |           |       |       |       |        |       |       |       |       |       |       |       |       |       |        |        |        |  |  |       |
| Standard de marca / Material norm: <b>SR EN 10025-2:2019</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                    |                     |                  |                                 |                             |                                                             |                                    |                      |                                                                                                     |                                          |              |            |            |                                                 |                             |        |        |        |                                                                             |                       |                    |                     |                  |                                 |                             |                                                             |                                    |  |  |  |  |  |  |  |  |  |     |    |                     |                                          |   |    |    |   |                             |                      |                      |     |                                  |              |            |            |            |   |       |          |        |        |       |       |           |       |       |       |        |       |       |       |       |       |       |       |       |       |        |        |        |  |  |       |
| Marcaj color:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                       |                    |                     |                  |                                 |                             |                                                             |                                    |                      |                                                                                                     |                                          |              |            |            |                                                 |                             |        |        |        |                                                                             |                       |                    |                     |                  |                                 |                             |                                                             |                                    |  |  |  |  |  |  |  |  |  |     |    |                     |                                          |   |    |    |   |                             |                      |                      |     |                                  |              |            |            |            |   |       |          |        |        |       |       |           |       |       |       |        |       |       |       |       |       |       |       |       |       |        |        |        |  |  |       |
| DOP: <b>AMHU-2/05 CPR-13-1</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                       |                    |                     |                  |                                 |                             |                                                             |                                    |                      |                                                                                                     |                                          |              |            |            |                                                 |                             |        |        |        |                                                                             |                       |                    |                     |                  |                                 |                             |                                                             |                                    |  |  |  |  |  |  |  |  |  |     |    |                     |                                          |   |    |    |   |                             |                      |                      |     |                                  |              |            |            |            |   |       |          |        |        |       |       |           |       |       |       |        |       |       |       |       |       |       |       |       |       |        |        |        |  |  |       |
| Observatii / Remarks:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |                    |                     |                  |                                 |                             |                                                             |                                    |                      |                                                                                                     |                                          |              |            |            |                                                 |                             |        |        |        |                                                                             |                       |                    |                     |                  |                                 |                             |                                                             |                                    |  |  |  |  |  |  |  |  |  |     |    |                     |                                          |   |    |    |   |                             |                      |                      |     |                                  |              |            |            |            |   |       |          |        |        |       |       |           |       |       |       |        |       |       |       |       |       |       |       |       |       |        |        |        |  |  |       |
| <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="3">Nr.Crt /<br/>No.Item</th> <th rowspan="3">Nr.Sarja /<br/>Heat No</th> <th rowspan="3">Marca /<br/>Quality</th> <th rowspan="3">Produs /<br/>Product</th> <th rowspan="3">Buc. /<br/>Pleces</th> <th rowspan="3">Cantitate /<br/>Quantity<br/>[kg]</th> <th rowspan="3">Lungime /<br/>Length<br/>[mm]</th> <th rowspan="3">Toleranta la<br/>lungime /<br/>Tolerance<br/>To length<br/>[mm]</th> <th colspan="10">Incerari mecanice/Mechanical tests</th> </tr> <tr> <th>ReH</th> <th>Rm</th> <th>A5</th> <th colspan="5">Incovolere prin soc / Charpy impact test</th> <th rowspan="2">Medie KV /<br/>Average<br/>KV</th> </tr> <tr> <th>[N/mm<sup>2</sup>]</th> <th>[N/mm<sup>2</sup>]</th> <th>[%]</th> <th>Tip epruveta /<br/>Type of sample</th> <th>Temp<br/>[°C]</th> <th>KV1<br/>[J]</th> <th>KV2<br/>[J]</th> <th>KV3<br/>[J]</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>72641</td> <td>S275JO+M</td> <td>IPE270</td> <td>20</td> <td>8.772</td> <td>12100</td> <td>-0 / +100</td> <td>320</td> <td>473</td> <td>32,0</td> <td>300/10</td> <td>0</td> <td>68,0</td> <td>82,0</td> <td>74,0</td> <td>81,3</td> </tr> </tbody> </table> |                       |                    |                     |                  |                                 |                             |                                                             |                                    |                      |                                                                                                     |                                          |              |            |            |                                                 |                             |        |        |        | Nr.Crt /<br>No.Item                                                         | Nr.Sarja /<br>Heat No | Marca /<br>Quality | Produs /<br>Product | Buc. /<br>Pleces | Cantitate /<br>Quantity<br>[kg] | Lungime /<br>Length<br>[mm] | Toleranta la<br>lungime /<br>Tolerance<br>To length<br>[mm] | Incerari mecanice/Mechanical tests |  |  |  |  |  |  |  |  |  | ReH | Rm | A5                  | Incovolere prin soc / Charpy impact test |   |    |    |   | Medie KV /<br>Average<br>KV | [N/mm <sup>2</sup> ] | [N/mm <sup>2</sup> ] | [%] | Tip epruveta /<br>Type of sample | Temp<br>[°C] | KV1<br>[J] | KV2<br>[J] | KV3<br>[J] | 1 | 72641 | S275JO+M | IPE270 | 20     | 8.772 | 12100 | -0 / +100 | 320   | 473   | 32,0  | 300/10 | 0     | 68,0  | 82,0  | 74,0  | 81,3  |       |       |       |       |        |        |        |  |  |       |
| Nr.Crt /<br>No.Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Nr.Sarja /<br>Heat No | Marca /<br>Quality | Produs /<br>Product | Buc. /<br>Pleces | Cantitate /<br>Quantity<br>[kg] | Lungime /<br>Length<br>[mm] | Toleranta la<br>lungime /<br>Tolerance<br>To length<br>[mm] | Incerari mecanice/Mechanical tests |                      |                                                                                                     |                                          |              |            |            |                                                 |                             |        |        |        |                                                                             |                       |                    |                     |                  |                                 |                             |                                                             |                                    |  |  |  |  |  |  |  |  |  |     |    |                     |                                          |   |    |    |   |                             |                      |                      |     |                                  |              |            |            |            |   |       |          |        |        |       |       |           |       |       |       |        |       |       |       |       |       |       |       |       |       |        |        |        |  |  |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                       |                    |                     |                  |                                 |                             |                                                             | ReH                                | Rm                   | A5                                                                                                  | Incovolere prin soc / Charpy impact test |              |            |            |                                                 | Medie KV /<br>Average<br>KV |        |        |        |                                                                             |                       |                    |                     |                  |                                 |                             |                                                             |                                    |  |  |  |  |  |  |  |  |  |     |    |                     |                                          |   |    |    |   |                             |                      |                      |     |                                  |              |            |            |            |   |       |          |        |        |       |       |           |       |       |       |        |       |       |       |       |       |       |       |       |       |        |        |        |  |  |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                       |                    |                     |                  |                                 |                             |                                                             | [N/mm <sup>2</sup> ]               | [N/mm <sup>2</sup> ] | [%]                                                                                                 | Tip epruveta /<br>Type of sample         | Temp<br>[°C] | KV1<br>[J] | KV2<br>[J] | KV3<br>[J]                                      |                             |        |        |        |                                                                             |                       |                    |                     |                  |                                 |                             |                                                             |                                    |  |  |  |  |  |  |  |  |  |     |    |                     |                                          |   |    |    |   |                             |                      |                      |     |                                  |              |            |            |            |   |       |          |        |        |       |       |           |       |       |       |        |       |       |       |       |       |       |       |       |       |        |        |        |  |  |       |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 72641                 | S275JO+M           | IPE270              | 20               | 8.772                           | 12100                       | -0 / +100                                                   | 320                                | 473                  | 32,0                                                                                                | 300/10                                   | 0            | 68,0       | 82,0       | 74,0                                            | 81,3                        |        |        |        |                                                                             |                       |                    |                     |                  |                                 |                             |                                                             |                                    |  |  |  |  |  |  |  |  |  |     |    |                     |                                          |   |    |    |   |                             |                      |                      |     |                                  |              |            |            |            |   |       |          |        |        |       |       |           |       |       |       |        |       |       |       |       |       |       |       |       |       |        |        |        |  |  |       |
| <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th colspan="20">Compozitie chimica pe otel lichid/Chemical analysis of the liquid steel [%]</th> </tr> <tr> <th>Nr.crt /<br/>No.Item</th> <th>Nr.Sarja /<br/>Heat No</th> <th>C</th> <th>Mn</th> <th>Si</th> <th>S</th> <th>P</th> <th>Cr</th> <th>Ni</th> <th>Cu</th> <th>Mo</th> <th>Ti</th> <th>V</th> <th>Al</th> <th>Sn</th> <th>B</th> <th>Nb</th> <th>N</th> <th>O(ppm)</th> <th>H(ppm)</th> <th>CEV</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>72641</td> <td>0,140</td> <td>0,580</td> <td>0,180</td> <td>0,005</td> <td>0,014</td> <td>0,120</td> <td>0,100</td> <td>0,340</td> <td>0,020</td> <td>0,001</td> <td>0,003</td> <td>0,002</td> <td>0,016</td> <td>0,0002</td> <td>0,0008</td> <td>0,0094</td> <td></td> <td></td> <td>0,295</td> </tr> </tbody> </table>                                                                                                                                                                                                                                                                                                                                                                             |                       |                    |                     |                  |                                 |                             |                                                             |                                    |                      |                                                                                                     |                                          |              |            |            |                                                 |                             |        |        |        | Compozitie chimica pe otel lichid/Chemical analysis of the liquid steel [%] |                       |                    |                     |                  |                                 |                             |                                                             |                                    |  |  |  |  |  |  |  |  |  |     |    | Nr.crt /<br>No.Item | Nr.Sarja /<br>Heat No                    | C | Mn | Si | S | P                           | Cr                   | Ni                   | Cu  | Mo                               | Ti           | V          | Al         | Sn         | B | Nb    | N        | O(ppm) | H(ppm) | CEV   | 1     | 72641     | 0,140 | 0,580 | 0,180 | 0,005  | 0,014 | 0,120 | 0,100 | 0,340 | 0,020 | 0,001 | 0,003 | 0,002 | 0,016 | 0,0002 | 0,0008 | 0,0094 |  |  | 0,295 |
| Compozitie chimica pe otel lichid/Chemical analysis of the liquid steel [%]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                       |                    |                     |                  |                                 |                             |                                                             |                                    |                      |                                                                                                     |                                          |              |            |            |                                                 |                             |        |        |        |                                                                             |                       |                    |                     |                  |                                 |                             |                                                             |                                    |  |  |  |  |  |  |  |  |  |     |    |                     |                                          |   |    |    |   |                             |                      |                      |     |                                  |              |            |            |            |   |       |          |        |        |       |       |           |       |       |       |        |       |       |       |       |       |       |       |       |       |        |        |        |  |  |       |
| Nr.crt /<br>No.Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Nr.Sarja /<br>Heat No | C                  | Mn                  | Si               | S                               | P                           | Cr                                                          | Ni                                 | Cu                   | Mo                                                                                                  | Ti                                       | V            | Al         | Sn         | B                                               | Nb                          | N      | O(ppm) | H(ppm) | CEV                                                                         |                       |                    |                     |                  |                                 |                             |                                                             |                                    |  |  |  |  |  |  |  |  |  |     |    |                     |                                          |   |    |    |   |                             |                      |                      |     |                                  |              |            |            |            |   |       |          |        |        |       |       |           |       |       |       |        |       |       |       |       |       |       |       |       |       |        |        |        |  |  |       |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 72641                 | 0,140              | 0,580               | 0,180            | 0,005                           | 0,014                       | 0,120                                                       | 0,100                              | 0,340                | 0,020                                                                                               | 0,001                                    | 0,003        | 0,002      | 0,016      | 0,0002                                          | 0,0008                      | 0,0094 |        |        | 0,295                                                                       |                       |                    |                     |                  |                                 |                             |                                                             |                                    |  |  |  |  |  |  |  |  |  |     |    |                     |                                          |   |    |    |   |                             |                      |                      |     |                                  |              |            |            |            |   |       |          |        |        |       |       |           |       |       |       |        |       |       |       |       |       |       |       |       |       |        |        |        |  |  |       |
| Utilizare preconizata/intended uses: <b>Structuri metalice si/sau structuri mixte otel-beton/Metalic structures and/or mixed structures steel-concrete</b><br>Durabilitate/Durability: <b>Compozitie chimica / Chemical analysis</b><br>Sudabilitate/Weldability: <b>CEV</b><br>Substanta reglementata/Regulated substance: <b>Performanta nedeterminata/No performance determined</b><br>Marcaj/Marked: <b>SR EN 10025-1:2005 ( EN 10025-1:2004 )</b><br>Suprafata/Surface: <b>SR EN 10163-3:2005, clasa C, subcl.1 ( EN 10163-3:2004 )</b><br>Dimensiuni/Dimension: <b>SR EN 10365/2017; EN 10365/2017</b><br>Tol. la dim. si forma / Tolerances on dimension and shape: <b>SR EN 10034/1995; EN 10034/1993</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                       |                    |                     |                  |                                 |                             |                                                             |                                    |                      |                                                                                                     |                                          |              |            |            |                                                 |                             |        |        |        |                                                                             |                       |                    |                     |                  |                                 |                             |                                                             |                                    |  |  |  |  |  |  |  |  |  |     |    |                     |                                          |   |    |    |   |                             |                      |                      |     |                                  |              |            |            |            |   |       |          |        |        |       |       |           |       |       |       |        |       |       |       |       |       |       |       |       |       |        |        |        |  |  |       |
| Materialul mai sus mentionat nu prezinta radioactivitate<br>The above mentioned material has not displayed any radioactivity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                    |                     |                  |                                 |                             |                                                             |                                    |                      | Intocmit/Elaborate:<br><br><b>CRISTIAN IOAN MICLEAN CIAPA</b>                                       |                                          |              |            |            | <br>12/1823                                     |                             |        |        |        |                                                                             |                       |                    |                     |                  |                                 |                             |                                                             |                                    |  |  |  |  |  |  |  |  |  |     |    |                     |                                          |   |    |    |   |                             |                      |                      |     |                                  |              |            |            |            |   |       |          |        |        |       |       |           |       |       |       |        |       |       |       |       |       |       |       |       |       |        |        |        |  |  |       |
| Inspectia Calitati si Statistici/Quality Inspection & Statistics<br>Quality Manager: <b>Ileana Cristea Eng</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                       |                    |                     |                  |                                 |                             |                                                             |                                    |                      |                                                                                                     |                                          |              |            |            |                                                 |                             |        |        |        |                                                                             |                       |                    |                     |                  |                                 |                             |                                                             |                                    |  |  |  |  |  |  |  |  |  |     |    |                     |                                          |   |    |    |   |                             |                      |                      |     |                                  |              |            |            |            |   |       |          |        |        |       |       |           |       |       |       |        |       |       |       |       |       |       |       |       |       |        |        |        |  |  |       |



## DECLARAȚIE DE PERFORMANȚĂ

Nr. 0102\_Placă\_de\_gips-carton\_H2\_12,5\_2013-06-07

1. Cod unic de identificare al produsului-tip: **SR EN 520 – H2**
2. Tipul, lotul sau numărul de serie sau orice alt element care permite identificarea produsului pentru construcții astfel cum este solicitat la articolul 11 alineatul (4): **Placa Knauf de gips-carton tip H2 12,5**
3. Utilizarea sau utilizările preconizate ale produsului pentru construcții, în conformitate cu specificația tehnică armonizată aplicabilă, astfel cum este prevăzut de fabricant:  
**Placă de gips-carton pentru încăperi cu umiditate ridicată**
4. Numele, denumirea socială sau marca înregistrată și adresa de contact a fabricantului, astfel cum se solicită în temeiul articolului 11 alineatul (5):  
**Knauf Bulgaria EOOD**  
**Angelov Vrah 27, 1618 Sofia, Bulgaria; Tel: (++359)-2917 8910;**  
**Fax: (++359)-2917 8943 Email:info@knauf.bg**
5. După caz, numele și adresa de contact a reprezentantului autorizat al cărui mandat acoperă atribuțiile specificate la articolul 12 alineatul (2):  
**SC Knauf Gips SRL**  
**City Gate Building-South Tower; Piața Presei Libere;**  
**Nr. 3-5; Et. 4; Sector 1 013702 Bucuresti;**  
**Tel.: +40 21 650 0040 Fax: +40 21 650 0048**
6. Sistemul sau sistemele de evaluare și verificare a constanței performanței produsului pentru construcții, astfel cum este prevăzut în anexa V: **Sistemul 4**
7. În cazul declarației de performanță privind un produs pentru construcții acoperit de un standard armonizat: **Nu este relevant. Încercarea inițială de tip al produsului și controlul producției în fabrica este efectuat de către producător.**
9. Performanța declarată:

| Caracteristici esențiale                                 | Performanța                                                                           | Specificațiile tehnice armonizate |
|----------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------|
| Clasa de reacție la foc                                  | A2-s1,d0 (B)                                                                          | (SR) EN 520+A1:2010               |
| Rezistența la forfecare $\uparrow\downarrow$             | PND                                                                                   | (SR) EN 520+A1:2010               |
| Factor de rezistență la difuzia vaporilor de apă - $\mu$ | 10/4 (EN ISO 10456)                                                                   | (SR) EN 520+A1:2010               |
| Coeficientul de conductivitate termică- $\lambda$        | 0,21 W/(m·K)(EN ISO 10456)                                                            | (SR) EN 520+A1:2010               |
| Ruperea la întindere din încovoiere – F                  | Îndeplinită                                                                           | (SR) EN 520+A1:2010               |
| Substanțe periculoase - SP                               | PND                                                                                   | (SR) EN 520+A1:2010               |
| Izolarea la sunetul aerian * - R                         | A se vedea documentația producătorului <a href="http://www.knauf.ro">www.knauf.ro</a> | (SR) EN 520+A1:2010               |
| Rezistența la impact* - $\rightarrow I$                  |                                                                                       |                                   |
| Absorbția acustică* - $\alpha$                           |                                                                                       |                                   |

\* Aceste caracteristici sunt dependente de sistemul din care face parte produsul și vor fi menționate în documentația producător bazându-se pe utilizarea preconizată. Performanțele declarate sunt pentru sistemele din care face parte acest produs.

Atunci când s-a utilizat documentația tehnică specifică în temeiul articolului 37 sau al articolului 38, cerințele pe care le respectă produsul: **Nu este relevant**

10. Performanța produsului identificat la punctele 1 și 2 este în conformitate cu performanța declarată de la punctul 9. Această declarație de performanță este emisă pe răspunderea exclusivă a fabricantului identificat la punctul 4.

Semnată pentru și în numele fabricantului de către:

Dr. Ing. Sav Vlăduț  
Coordonator Tehnic  
Knauf Gips Romania

Aghiresu, jud. Cluj, 01.07.2013







**Knauf Bulgaria EOOD**  
**Angelov Vrah 27, 1618 Sofia, Bulgaria; Tel: (++359)-2917 8910; Fax:**  
**(++359)-2917 8943 Email:info@knauf.bg**

**10**

**Nr. 0102\_Placă\_de\_gips-carton\_H2\_12,5\_2013-06-07**

**(SR) EN 520+A1:2010**

**H2- 12,5 – EN 520**

Placă de gips-carton pentru încăperi cu umiditate ridicată

|                                                                             |                            |
|-----------------------------------------------------------------------------|----------------------------|
| <b>Clasa de reacție la foc:</b>                                             | A2-s1,d0 (B)               |
| <b>Rezistența la forfecare - <math>\uparrow\downarrow</math>:</b>           | PND                        |
| <b>Factor de rezistență la difuzia vaporilor de apă - <math>\mu</math>:</b> | 10/4 (EN ISO 10456)        |
| <b>Coeficientul de conductivitate termică - <math>\lambda</math>:</b>       | 0,21 W/(m K)(EN ISO 10456) |
| <b>Ruperea la întindere din încovoiere - F:</b>                             | Îndeplinită                |
| <b>Substanțe periculoase - SP:</b>                                          | PND                        |

**Izolarea la sunetul aerian - R:**

**Izolarea la sunetul aerian -  $\alpha$ :**

**Rezistența la impact -  $\rightarrow I$ :**

A se vedea documentația  
producătorului

[www.knauf.ro](http://www.knauf.ro)

## DECLARAȚIE DE PERFORMANȚĂ

Nr. 04BXIBAB

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                         |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| 1  | Cod unic de identificare al produsului-tip:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Isobox_Isopiano_Isorighe</b>                                                                         |
| 2  | Utilizare (utilizari) preconizata (preconizate):<br>Panouri sandviș autoportante, izolante, cu ambele fețe de tablă metalică pentru acoperirea interioară și exterioară a peretelui și a plafoanelor<br>Produsele furnizate de către Vânzător Cumpărătorului, cu excepția cazului în care părțile convin altfel în scris, nu contribuie în niciun fel la stabilitatea parțială sau completă a structurii construcției; în concluzie, acestea nu pot susține sarcini verticale - orizontale sau statice de tip permanent (se exclude greutatea proprie și/ sau instalațiile fotovoltaice care ar putea fi instalate pe acestea), având rolul unic de a servi drept acoperire/ învelitoare a unei structuri portante existente a cărei proiectare și realizare trebuie făcută de către Cumpărător pe propria și exclusivă sa răspundere. |                                                                                                         |
| 3  | Fabricant:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>ISOPAN EST: Soseaua De Centura, 109 - 077160, Popești Leordeni (București) RO</b>                    |
| 5  | Sistemul (sistemele) de evaluare și de verificare a constanței performanței:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>Sistem 3</b>                                                                                         |
| 6a | Standard armonizat:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>SR EN 14509:2013</b>                                                                                 |
|    | Organism (organisme) notificat(e):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>LGAI TECHNOLOGICAL CENTER, S. A.(Applus+) - NB 0370</b><br><b>FIRES, S.R.O. - NB 1396</b>            |
| 7  | Performanța (performanțe) declarată (declarate):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Caracteristicile tehnice ale produsului sunt atasate acestei Declarații de Performanță ( pag. 2)</b> |

Performanța produsului identificat mai sus este în conformitate cu setul de performanțe declarate. Această declarație de performanță este eliberată în conformitate cu Regulamentul (UE) Nr. 305/2011, pe răspunderea exclusivă a fabricantului identificat mai sus.

Semnată pentru și în numele fabricantului de către:

Semnătură:

Nume și funcție:

Locul:

Data:

Pag 1/2

### SC ISOPAN EST srl

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| Declarație de Performanță - Nr. 04BXIBAB                                                           |                        |                              |                |
|----------------------------------------------------------------------------------------------------|------------------------|------------------------------|----------------|
| Caracteristici esențiale:                                                                          | Grosimea panoului [mm] |                              | Specificațiile |
|                                                                                                    | 100                    |                              |                |
|                                                                                                    |                        | Tehnice Armonizate           |                |
| Material izolanț                                                                                   |                        | ISOPAN PIR                   |                |
| Coeficient de transmisie termică U [W/m²K]                                                         |                        | 0,22                         |                |
| Conductivitate termică [W/mK]                                                                      |                        | λd= 0,022                    |                |
| Proprietăți mecanice                                                                               |                        |                              |                |
| Rezistență la tracțiune [MPa]                                                                      |                        | 0,10                         |                |
| Rezistență la compresiune [MPa]                                                                    |                        | 0,11                         |                |
| Rezistență la forfecare [MPa]                                                                      |                        | 0,10                         |                |
| Rezistență la forfecare pe termen lung[MPa]                                                        |                        | 0,04                         |                |
| Modul de forfecare [MPa]                                                                           |                        | 2,60                         |                |
| Coeficient de fluaj t=2000h                                                                        |                        | 0,60                         |                |
| Coeficient de fluaj t=100000h                                                                      |                        | 1,57                         |                |
| Rezistența la îndoire* [MPa]                                                                       |                        |                              |                |
| Față exterioară, în deschidere                                                                     |                        | 105                          |                |
| Față exterioară, în deschidere<br>( temperatură ridicată )                                         |                        | 100                          |                |
| Față exterioară, la reazem central                                                                 |                        | 99                           |                |
| Față exterioară, la reazem central<br>( temperatură ridicată )                                     |                        | 98                           |                |
| Față interioară, în deschidere                                                                     |                        | 84                           |                |
| Față interioară, la reazem central                                                                 |                        | 69                           |                |
| *Factor de conversie Rezistență la îndoiere ( luați în considerare grosimea în funcție de comandă) |                        |                              |                |
| Grosime placă din oțel [mm]                                                                        | 0,50                   | EN 14509<br>( A5.5.3)        |                |
| Față exterioară                                                                                    | 0,89                   |                              |                |
| Față interioară                                                                                    | 0,89                   |                              |                |
| Reacția la foc**                                                                                   |                        | Bs2d0                        |                |
| Rezistența la foc**                                                                                |                        | EI30                         |                |
|                                                                                                    |                        |                              |                |
| Permeabilitate la apă                                                                              |                        | NPD                          |                |
| Permeabilitate la aer [(m³/h)/m² - 50Pa]                                                           |                        | ≤ 1,5                        |                |
| Permeabilitate la vapori de apă                                                                    |                        | IMPERMEABIL                  |                |
| Izolare la zgomot aerian                                                                           |                        | NPD                          |                |
| Absorția sunetului                                                                                 |                        | NPD                          |                |
| Durabilitate                                                                                       |                        | ÎNDEPLINITĂ - TOATE CULORILE |                |
| Substanțe periculoase                                                                              |                        | NPD                          |                |
| Descrierea materialului                                                                            |                        |                              |                |
| Grosime oțel față exterioară [mm]                                                                  |                        | 0,50                         |                |
| Grosime oțel față interioară [mm]                                                                  |                        | 0,50                         |                |
| Calitatea oțelului interior și exterior                                                            |                        | S250 GD + Z                  |                |
| Acoperire exterior [μm]                                                                            |                        | Poliester PS25, Alb Gri      |                |
| Acoperire interior [μm]                                                                            |                        | Poliester PS25, Alb Gri      |                |
| Densitate [Kg/m³]                                                                                  |                        | 40 +/- - 10%                 |                |

(\*\*) Realizarea acestei performanțe este legată de indicațiile conținute în Raportul de clasificare.

(\*) Pentru instalări de pereți; (\*) Plăfoane cu rezistență la foc independentă

Valorile indică caracteristici minime de performanță ale panoului oferent prezentei D.o.P., conform specificațiilor produsului prezentat în factură și pe fiecare ambalaj. ISOPAN răspunde, în timpul și termenii definiți în actuala Directivă Europeană (1999/44/CE), pentru caracteristicile funcționale ale panourilor sandwich comercializate, cu condiția ca acestea să fie corect depozitate, manipulate, asamblate, utilizate și întreținute în timp; cu respectarea deplină a instrucțiunilor tehnice prevăzute în cataloagele noastre și în specificațiile tehnice ale produsului (disponibile pe site-ul nostru). Vânzarea este reglementată de prevederile Convenției de la Viena privind vânzările internaționale.

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#### SC ISOPAN EST srl

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## DECLARAȚIE DE PERFORMANȚĂ

Nr. 04RFMWABC

|    |                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | Cod unic de identificare al produsului-tip:                                  | <b>IsofireRoof</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2  | Utilizare (utilizari) preconizata (preconizate):                             | <p><b>Panouri sandwich autoportante, izolante, cu ambele fețe de tablă metalică pentru acoperirea acoperișurilor clădirilor</b></p> <p>Produsele furnizate de către Vânzător Cumpărătorului, cu excepția cazului în care părțile convin altfel în scris, nu contribuie în niciun fel la stabilitatea parțială sau completă a structurii construcției; în concluzie, acestea nu pot susține sarcini verticale - orizontale sau statice de tip permanent (se exclude greutatea proprie și/ sau instalațiile fotovoltaice care ar putea fi instalate pe acestea), având rolul unic de a servi drept acoperire/ învelitoare a unei structuri portante existente a cărei proiectare și realizare trebuie făcută de către Cumpărător pe propria și exclusivă sa răspundere.</p> |
| 3  | Fabricant:                                                                   | <b>ISOPAN EST: Soseaua De Centura, 109 - 077160, Popești Leordeni (București) RO</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 5  | Sistemul (sistemele) de evaluare și de verificare a constanței performanței: | <b>Sistem 3</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 6a | Standard armonizat:                                                          | <b>SR EN 14509:2013</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|    | Organism (organisme) notificat(e):                                           | <p><b>FIRES S.R.O. - NB 1396</b></p> <p><b>CSI SPA - NB 0497</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 7  | Performanța (performanțe) declarată (declarate):                             | <b>Caracteristicile tehnice ale produsului sunt atasate acestei Declarații de Performanță ( pag. 2)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

Performanța produsului identificat mai sus este în conformitate cu setul de performanțe declarate. Această declarație de performanță este eliberată în conformitate cu Regulamentul (UE) Nr. 305/2011, pe răspunderea exclusivă a fabricantului identificat mai sus.

Semnată pentru și în numele fabricantului de către:

Semnătură:

Nume și funcție:

Locul:

Data:

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### SC ISOPAN EST srl

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| Declarație de Performanță - Nr. 04RFMWABC                                                          |                        |                                    |      |                       |
|----------------------------------------------------------------------------------------------------|------------------------|------------------------------------|------|-----------------------|
| Caracteristici esențiale:                                                                          | Grosimea panoului [mm] |                                    |      | Specificațiile        |
|                                                                                                    | 150                    |                                    |      | Tehnice Armonizate    |
| Material izolant                                                                                   |                        | ISOPAN Mineral Wool                |      |                       |
| Coeficient de transmisie termică U [W/m²K]                                                         |                        | 0,27                               |      |                       |
| Conductivitate termică [W/mK]                                                                      |                        | λd=0,041                           |      |                       |
| Proprietăți mecanice                                                                               |                        |                                    |      |                       |
| Rezistență la tracțiune [MPa]                                                                      |                        | 0,05                               |      |                       |
| Rezistență la compresiune [MPa]                                                                    |                        | 0,06                               |      |                       |
| Rezistență la forfecare [MPa]                                                                      |                        | 0,05                               |      |                       |
| Rezistență la forfecare pe termen lung[MPa]                                                        |                        | 0,02                               |      |                       |
| Modul de forfecare [MPa]                                                                           |                        | 3,00                               |      |                       |
| Coeficient de fluaj t=2000h                                                                        |                        | 0,78                               |      |                       |
| Coeficient de fluaj t=100000h                                                                      |                        | 1,69                               |      |                       |
| Rezistența la îndoire* [MPa]                                                                       |                        |                                    |      |                       |
| Față exterioară, în deschidere                                                                     |                        | 125                                |      |                       |
| Față exterioară, în deschidere ( temperatură ridicată )                                            |                        | 113                                |      |                       |
| Față exterioară, la reazem central                                                                 |                        | 125                                |      |                       |
| Față exterioară, la reazem central ( temperatură ridicată )                                        |                        | 113                                |      |                       |
| Față interioară, în deschidere                                                                     |                        | 63                                 |      |                       |
| Față interioară, la reazem central                                                                 |                        | 63                                 |      |                       |
| *Factor de conversie Rezistență la îndoiere ( luați în considerare grosimea în funcție de comandă) |                        |                                    |      |                       |
| Grosime placă din oțel [mm]                                                                        |                        | 0,50                               | 0,60 | EN 14509<br>( A5.5.3) |
| Față exterioară                                                                                    |                        |                                    | 1,00 |                       |
| Față interioară                                                                                    |                        | 1,00                               |      |                       |
| Reacția la foc**                                                                                   |                        |                                    |      |                       |
|                                                                                                    |                        | A2s1d0                             |      |                       |
| Rezistența la foc**                                                                                |                        |                                    |      |                       |
|                                                                                                    |                        | REI30                              |      |                       |
| Rezistența la foc exterior                                                                         |                        |                                    |      |                       |
|                                                                                                    |                        | Broof(t1)-Broof(t2)-Broof(t3) CWFT |      |                       |
| Permeabilitate la apă                                                                              |                        |                                    |      |                       |
|                                                                                                    |                        | CLASS B                            |      |                       |
| Permeabilitate la aer [(m³/h)/m² - 50Pa]                                                           |                        |                                    |      |                       |
|                                                                                                    |                        | ≤ 1,5                              |      |                       |
| Permeabilitate la vaporii de apă                                                                   |                        |                                    |      |                       |
|                                                                                                    |                        | IMPERMEABIL                        |      |                       |
| Izolare la zgomot aerian                                                                           |                        |                                    |      |                       |
|                                                                                                    |                        | NPD                                |      |                       |
| Absorția sunetului                                                                                 |                        |                                    |      |                       |
|                                                                                                    |                        | NPD                                |      |                       |
| Durabilitate                                                                                       |                        |                                    |      |                       |
|                                                                                                    |                        | ÎNDEPLINĂ - TOATE CULORILE         |      |                       |
| Substanțe periculoase                                                                              |                        |                                    |      |                       |
|                                                                                                    |                        | NPD                                |      |                       |
| Descrierea materialului                                                                            |                        |                                    |      |                       |
| Grosime oțel față exterioară [mm]                                                                  |                        | 0,60                               |      |                       |
| Grosime oțel față interioară [mm]                                                                  |                        | 0,50                               |      |                       |
| Calitatea oțelului interior și exterior                                                            |                        | S250 GD + Z                        |      |                       |
| Acoperire exterior [μm]                                                                            |                        | Poliester PS25, Alb Gri            |      |                       |
| Acoperire interior [μm]                                                                            |                        | Poliester PS25, Alb Gri            |      |                       |
| Densitate [Kg/m³]                                                                                  |                        | 100 +/- 10%                        |      |                       |

(\*) Pentru instalări de acoperișuri

Valorile indică caracteristici minime de performanță ale panoului oferit prezentei D.o.P., conform specificațiilor produsului prezentat în factură și pe fiecare ambalaj. ISOPAN răspunde, în timpul și termenii definiți în actuala Directivă Europeană (1999/44/CE), pentru caracteristicile funcționale ale panourilor sandwich comercializate, cu condiția ca acestea să fie corect depozitate, manipulate, asamblate, utilizate și întreținute în timp; cu respectarea deplină a instrucțiunilor tehnice prevăzute în cataloagele noastre și în specificațiile tehnice ale produsului (disponibile pe site-ul nostru). Vânzarea este reglementată de prevederile Convenției de la Viena privind vânzările internaționale.

Pag 2/2

#### SC ISOPAN EST srl

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ISOCINDU (Mexico)

**In acord cu Regulamentul 305/2011, Anexa V**  
**Declaratie de Performanta**  
**Nr. DoP : 002/2013-07-01**



## DECLARAȚIE DE PERFORMANȚĂ Nr 05CPR/B1a/RO/03

1. Cod unic de identificare al produsului-tip: **05/B1a/GL/RO**
2. Utilizarea preconizată sau utilizarea:  
**Plăci ceramice presate pe uscat cu o absorbție de apă 3%<E≤6%; Anexa I; Grupul B1a, glazurate (GL); pentru utilizare în interiorul clădirilor pe pereți și pardoseli - în conformitate cu descrierea de pe ambalaj.**
3. Producător: **ROVESE S.A.; AL. Solidarności 36; 25-323 Kielce**
4. Sistemul (sistemele) de evaluare și verificare a constantei de performanță: **SISTEM 4**
5. Standardul armonizat: **EN 14411:2012**
6. Performanța declarată:

| Caracteristici esențiale                           | Proprietățile de utilizare (nivel și / sau clasă) | Specificația tehnică armonizată  |
|----------------------------------------------------|---------------------------------------------------|----------------------------------|
| Reacția la foc                                     | A1 <sub>FL</sub>                                  | Clasificate fără cercetări (NCT) |
| Eliberarea substanțelor periculoase:               |                                                   | EN 14411:2012                    |
| - Cadmiu                                           | Max 0,07mg/mm <sup>2</sup>                        |                                  |
| - Plumb                                            | Max 0,8mg/mm <sup>2</sup>                         |                                  |
| Forța de rupere:                                   |                                                   |                                  |
| - grosimea ≥ 7,5mm                                 | ≥ 1000N                                           |                                  |
| - grosimea < 7,5mm                                 | ≥ 600N                                            |                                  |
| Forța de legare / aderență [N/mm2]:                |                                                   |                                  |
| - adezivi pe bază de ciment                        | NPD – proprietățile de utilizare nedeterminate    |                                  |
| - adezivi de dispersie                             |                                                   |                                  |
| - adezivi pe bază de rășini reactive               |                                                   |                                  |
| - mortar                                           |                                                   |                                  |
| Alunecarea în conformitate cu standardul DIN 51130 | În conformitate cu declarația de pe ambalaj       |                                  |
| Rezistența la șoc termic                           | Îndeplinește                                      |                                  |
| Durabilitate pentru:                               |                                                   |                                  |
| - aplicații interne:                               | Îndeplinește                                      |                                  |
| - aplicații externe: rezistență la îngheț-dezgeț   | Nu îndeplinește                                   |                                  |
| Simțul atingerii                                   | NPD – proprietățile de utilizare nedeterminate    |                                  |

Copia Declarației de Performanță se află pe pagina web: [www.rovese.com](http://www.rovese.com)

Performanțele produsului specificate mai sus sunt în concordanță cu lista de performanțe declarate. Această declarație de performanță este emisă în conformitate cu Regulamentul (UE) nr 305/2011 pe răspunderea exclusivă a producătorului menționat anterior.

Semnată în numele fabricantului de către:

Kielce, 01.01.2017  
(locul și data emiterii)

.....  
(semnătura)

Публічне акціонерне товариство "Запорізький металургійний комбінат "Запоріжсталь"  
Public Joint Stock Company "Integrated Iron and Steel Works "Zaporizhstal"

Україна 69008 м. Запоріжжя Південне шосе, 72

UKRAINE 69008 Zaporizhzhya 72. Pivdenne Shose

факс +38 (061) 213-18-58

Fax +38 (061) 213-18-58

СЕРТИФІКАТ ЯКОСТІ / QUALITY CERTIFICATE № 80913

від / date 17.04.2023

Одержувач / consignee

Замовлення комбінату № / Manufacturer's works order

Філія ТОВ "МЕТІНВЕСТ-СМЦ" у м.Одеса

2023 971000-0280

65031 м. Одеса, Одеська обл. дор.Новомосковская, б.23/1

Контракт № / Contract

станція призначення ОДЕСА-ЗАСТАВА 1 (Од.ЗАЛ.)

МЗК-1327342/10/20/СМЦ-С

від/date 06.10.2020

Вид свідчення про випробування

Type of inspection document

EN 10204/3.1

|                                                                                                                                              |                                                                                                                                |                     |
|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Вагон № / Freight car: 55671556                                                                                                              | Вид вантажмість / Type of packages<br>Кількість мість/Number of packages                                                       | пачки / packs<br>10 |
| Найменування та код товару / Description and code of goods<br>97100 Прокат листовий г/к з вуглецевої сталі звичайної якості<br>без травлення | НД на продукцію: хімсклад / Specification forms and record<br>ДСТУ 8803:2018<br>ДСТУ 2651:2005/ГОСТ 380-2005<br>ДСТУ 8540:2015 |                     |
| Маркування продукції: ГАРЯЧЕКАТАНИЙ ЛИСТ / HOT ROLLED STEEL SHEETS                                                                           |                                                                                                                                |                     |

## Результати випробувань / Result of trial

| № п/п<br>Item № | № плавки<br>Heat № | № партії<br>Batch № | Марка<br>Grade | Категорія<br>Category | Група<br>міцності<br>Group of<br>strength | Розміри, мм<br>Dimensions, mm |                 |                   | Кількість<br>товару<br>Number<br>of<br>goods | С<br>о<br>р<br>т | Маса, т<br>Mass, tons |                   |              |
|-----------------|--------------------|---------------------|----------------|-----------------------|-------------------------------------------|-------------------------------|-----------------|-------------------|----------------------------------------------|------------------|-----------------------|-------------------|--------------|
|                 |                    |                     |                |                       |                                           | Товщина<br>Thickness          | Ширина<br>Width | Довжина<br>Length |                                              |                  | брутто<br>gross       | брутто2<br>gross2 | нетто<br>net |
| 1               | 823061             | 101690-15           | СТЗПС          | 5                     |                                           | 6,00                          | 1500            | 6000              | 1                                            |                  | 6,210                 |                   | 6,190        |
| 2               | 823061             | 101690-16           | СТЗПС          | 5                     |                                           | 6,00                          | 1500            | 6000              | 1                                            |                  | 6,170                 |                   | 6,150        |
| 3               | 823061             | 101690-17           | СТЗПС          | 5                     |                                           | 6,00                          | 1500            | 6000              | 1                                            |                  | 6,230                 |                   | 6,210        |
| 4               | 823061             | 101690-18           | СТЗПС          | 5                     |                                           | 6,00                          | 1500            | 6000              | 1                                            |                  | 6,250                 |                   | 6,230        |
| 5               | 823061             | 101690-19           | СТЗПС          | 5                     |                                           | 6,00                          | 1500            | 6000              | 1                                            |                  | 4,150                 |                   | 4,130        |
| 6               | 1223060            | 101771-3            | СТЗПС          | 5                     |                                           | 8,00                          | 1500            | 6000              | 1                                            |                  | 6,705                 |                   | 6,690        |
| 7               | 1223060            | 101771-4            | СТЗПС          | 5                     |                                           | 8,00                          | 1500            | 6000              | 1                                            |                  | 6,745                 |                   | 6,730        |
| 8               | 1223060-9          | 101773-1            | СТЗПС          | 5                     |                                           | 8,00                          | 1500            | 6000              | 1                                            |                  | 6,715                 |                   | 6,700        |
| 9               | 1223060-9          | 101773-2            | СТЗПС          | 5                     |                                           | 8,00                          | 1500            | 6000              | 1                                            |                  | 6,705                 |                   | 6,690        |
| 10              | 1223060-9          | 101773-3            | СТЗПС          | 5                     |                                           | 8,00                          | 1500            | 6000              | 1                                            |                  | 6,685                 |                   | 6,670        |
| Разом:          |                    |                     |                |                       |                                           |                               |                 |                   |                                              |                  | 62,565                |                   | 62,390       |



Даними цього сертифікату підтверджується, що продукція випробувана і відповідає стандартам якості, діючим в Україні, технічним умовам і погодженим умовам замовлення контракту.  
It is hereby certified that the quality of goods mentioned in this shipping document is in conformity with the standards in the Ukraine, specifications and goods may be expofed.

| № п/ч<br>Item № | № позиції<br>замовлення<br>Order<br>reference № | Ознака<br>обробки<br>Sign<br>treatment | Шифр<br>кальк.<br>групи<br>Group<br>code | Форма розкрою<br>Pattern<br>cutting | Якість<br>поверхні<br>Surface<br>quality | Точність<br>прокатки /<br>виготовлення<br>Rolling<br>accuracy /<br>manufacturing | Категорія<br>витяжки<br>Category<br>of<br>drawing | Площинність<br>Flatness | Характер<br>кромки<br>Trim<br>of edge | Гарантія<br>зварювання<br>Weldability | Оздоблення<br>поверхні<br>Surface<br>finish | Інші<br>характеристики<br>Other<br>features |
|-----------------|-------------------------------------------------|----------------------------------------|------------------------------------------|-------------------------------------|------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------|-------------------------|---------------------------------------|---------------------------------------|---------------------------------------------|---------------------------------------------|
| 1-5             | 1                                               | Б/ТРАВЛ                                | 88102                                    | 4                                   |                                          | Б                                                                                |                                                   | ПН                      | НО                                    |                                       |                                             |                                             |
| 6-10            | 2                                               | Б/ТРАВЛ                                | 88102                                    | 4                                   |                                          | Б                                                                                |                                                   | ПН                      | НО                                    |                                       |                                             |                                             |

| № п/ч<br>Item № | № плавки<br>Heat № | Хімічний склад, % |            |            |            |            |            |            |            |            |             | Composition, % |            |             |          |            |             |  |
|-----------------|--------------------|-------------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|----------------|------------|-------------|----------|------------|-------------|--|
|                 |                    | C<br>x100         | Mn<br>x100 | Si<br>x100 | S<br>x1000 | P<br>x1000 | Cr<br>x100 | Ni<br>x100 | Cu<br>x100 | As<br>x100 | N2<br>x1000 | Al<br>x100     | Ti<br>x100 | Mo<br>x1000 | CEV<br>% | V<br>x1000 | B<br>x10000 |  |
| 1-5             | 823061 *           | 18                | 37         | 1.7        | 41         | 12         | 4          | 1          | 1          | 8          | 8           |                | 0.1        | 1           | 0.251    | 1          |             |  |
| 6-7             | 1223060 *          | 17                | 39         | 2          | 30         | 24         | 4          | 1          | 1          | 8          | 8           |                | 0.1        | 4           | 0.246    | 3          |             |  |
| 8-10            | 1223060-9 *        | 17                | 39         | 2          | 30         | 24         | 4          | 1          | 1          | 8          | 8           |                | 0.1        | 4           | 0.246    | 3          |             |  |

| № п/ч<br>Item № | Розміри зразка<br>D m of specimen |                 | Механічні і технологічні властивості |     |                                   |                                     |                                   |                                   |               |                       |                                   |                                      | Mechanical and technological properties |                                                  |                             |     |                             |                                  |                                   |                              |                       |                                     |
|-----------------|-----------------------------------|-----------------|--------------------------------------|-----|-----------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|---------------|-----------------------|-----------------------------------|--------------------------------------|-----------------------------------------|--------------------------------------------------|-----------------------------|-----|-----------------------------|----------------------------------|-----------------------------------|------------------------------|-----------------------|-------------------------------------|
|                 |                                   |                 | Місце відб пр. Sample Location       |     | Напрямок відб пр. Dir. of test pr | Тимчасовий опір<br>Tensile strength | Гранична плинність<br>Yield point | Відносне подовження<br>Elongation | Вигин<br>Bend | Твердість<br>Hardness | Глибина сферич. дупки<br>Erickson | Ударна в'язкість<br>Impact toughness |                                         |                                                  |                             |     |                             | Номер зерна фериту<br>Grain size | Декарбонізація<br>Decarburization | Шорсткість<br>Roughness (RA) | Центрити<br>Cementite | Метод випробувань<br>Testing method |
|                 | KCU                               |                 |                                      |     |                                   |                                     |                                   |                                   |               |                       |                                   | KCV                                  |                                         | Після механічного старіння<br>After mech. ageing |                             |     |                             |                                  |                                   |                              |                       |                                     |
|                 | Товщина<br>Thickness              | Ширина<br>Width | S,E                                  | L,T | кгс/мм2                           | кгс/мм2                             | %                                 |                                   |               |                       | mm                                | t                                    | кгс/см <sup>2</sup><br>x102             | t                                                | кгс/см <sup>2</sup><br>x102 | t   | кгс/см <sup>2</sup><br>x102 |                                  | %                                 | МКМ                          |                       |                                     |
| 1-5             | 6.00                              | 1500            |                                      |     | 42,5                              | 26,0                                | 33,0                              | уд                                |               |                       |                                   | -20                                  | 16,8                                    | 20                                               | 6,6                         | 250 | 7,7                         |                                  |                                   |                              | руїн                  |                                     |
|                 | 6.00                              | 1500            |                                      |     | 42,0                              | 26,5                                | 32,0                              | уд                                |               |                       |                                   | -20                                  | 15,7                                    | 20                                               | 7,7                         | 250 | 6,4                         |                                  |                                   |                              | руїн                  |                                     |
|                 | 6.00                              | 1500            |                                      |     |                                   |                                     |                                   |                                   |               |                       |                                   | -20                                  | 16,3                                    | 20                                               | 7,9                         | 250 | 6,8                         |                                  |                                   |                              | руїн                  |                                     |
|                 | 6.00                              | 1500            |                                      |     |                                   |                                     |                                   |                                   |               |                       |                                   | -20                                  | 17,3                                    | 20                                               | 7,1                         | 250 | 7,6                         |                                  |                                   |                              | руїн                  |                                     |
|                 | 6.00                              | 1500            |                                      |     |                                   |                                     |                                   |                                   |               |                       |                                   | -20                                  | 16,8                                    | 20                                               | 7,3                         | 250 | 6,6                         |                                  |                                   |                              | руїн                  |                                     |
| 6-7             | 6.00                              | 1500            |                                      |     |                                   |                                     |                                   |                                   |               |                       |                                   | -20                                  | 16,5                                    | 20                                               | 6,8                         | 250 | 7,5                         |                                  |                                   |                              | руїн                  |                                     |
|                 | 8.00                              | 1500            |                                      |     | 42,0                              | 27,5                                | 31,0                              | уд                                |               |                       |                                   | -20                                  | 7,1                                     | 20                                               | 15,2                        | 250 | 6,7                         |                                  |                                   |                              | руїн                  |                                     |
|                 | 8.00                              | 1500            |                                      |     | 42,5                              | 29,5                                | 33,0                              | уд                                |               |                       |                                   | -20                                  | 8,1                                     | 20                                               | 16,4                        | 250 | 5,5                         |                                  |                                   |                              | руїн                  |                                     |
|                 | 8.00                              | 1500            |                                      |     |                                   |                                     |                                   |                                   |               |                       |                                   | -20                                  | 7,4                                     | 20                                               | 17,2                        | 250 | 5,9                         |                                  |                                   |                              | руїн                  |                                     |
|                 | 8.00                              | 1500            |                                      |     |                                   |                                     |                                   |                                   |               |                       |                                   | -20                                  | 7,8                                     | 20                                               | 16,7                        | 250 | 6,6                         |                                  |                                   |                              | руїн                  |                                     |
| 8-10            | 8.00                              | 1500            |                                      |     |                                   |                                     |                                   |                                   |               |                       |                                   | -20                                  | 8,6                                     | 20                                               | 14,9                        | 250 | 7,8                         |                                  |                                   |                              | руїн                  |                                     |
|                 | 8.00                              | 1500            |                                      |     |                                   |                                     |                                   |                                   |               |                       |                                   | -20                                  | 7,4                                     | 20                                               | 15,2                        | 250 | 5,9                         |                                  |                                   |                              | руїн                  |                                     |
|                 | 8.00                              | 1500            |                                      |     | 42,5                              | 27,0                                | 30,0                              | уд                                |               |                       |                                   | -20                                  | 6,0                                     | 20                                               | 16,2                        | 250 | 6,0                         |                                  |                                   |                              | руїн                  |                                     |
|                 | 8.00                              | 1500            |                                      |     | 42,5                              | 28,0                                | 31,0                              | уд                                |               |                       |                                   | -20                                  | 6,4                                     | 20                                               | 15,9                        | 250 | 6,8                         |                                  |                                   |                              | руїн                  |                                     |
|                 | 8.00                              | 1500            |                                      |     |                                   |                                     |                                   |                                   |               |                       |                                   | -20                                  | 5,7                                     | 20                                               | 16,3                        | 250 | 5,9                         |                                  |                                   |                              | руїн                  |                                     |
|                 | 8.00                              | 1500            |                                      |     |                                   |                                     |                                   |                                   |               |                       |                                   | -20                                  | 6,6                                     | 20                                               | 13,8                        | 250 | 6,2                         |                                  |                                   |                              | руїн                  |                                     |
|                 | 8.00                              | 1500            |                                      |     |                                   |                                     |                                   |                                   |               |                       |                                   | -20                                  | 6,5                                     | 20                                               | 12,8                        | 250 | 6,8                         |                                  |                                   |                              | руїн                  |                                     |
|                 | 8.00                              | 1500            |                                      |     |                                   |                                     |                                   |                                   |               |                       |                                   | -20                                  | 6,7                                     | 20                                               | 14,9                        | 250 | 6,0                         |                                  |                                   |                              | руїн                  |                                     |
|                 | 8.00                              | 1500            |                                      |     |                                   |                                     |                                   |                                   |               |                       |                                   | -20                                  | 6,7                                     | 20                                               | 14,9                        | 250 | 6,0                         |                                  |                                   |                              | руїн                  |                                     |

\*S-початок смуги/strip start, E-кінець смуги/strip end, L-подовжнє/longitudinal, T-поперечне/Transverse"



ЗАУВ.Х/А: плавка з індексом Продукта аргоном Розкислена АІ

Штамп, підпис відповідальної особи  
Stamp, signature of the person in charge

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# CERTIFICATO DI CONTROLLO 3.1 / INSPECTION CERTIFICATE 3.1 - EN 10204:2004



**METINVEST**  
FERRIERA VALSIDER SPA

(A) PROCESSO DI ELABORAZIONE / STEELMAKING PROCESS: E = ELECTRIC ; BO = BASIC OXYGEN  
(B) STATO DI FORNITURA / DELIVERY CONDITION: AR = GREZZO DI LAMINAZIONE / AS ROLLED ;  
N° = LAMINAZIONE A TEMPERATURA CONTROLLATA / NORMALIZED ROLLING ;  
N = NORMALIZZATO / NORMALIZED at 910°C, 1,5 min/mm ; ARIA CALMA / STILL AIR ;  
R = RICOTTO / ANNEALED ;  
N+R = NORMALIZZATO + RINVENUTO / NORMALIZED + ANNEALED ;  
M = LAMINAZIONE TERMOMECCANICA / Thermomechanical rolling  
(C) TRATTAMENTO TERMICO DEL CAMPIONE / HEAT TREATMENT OF SAMPLE:  
N = 910°C, 1,5 min/mm ; ARIA CALMA / STILL AIR  
R = 650°C, 1,5 min/mm ; ARIA CALMA / STILL AIR  
(D) Ceq,1 = C + Mn/6 ; Ceq,2 = C + Mn/6 + (Cr + Mo + V)/5 + (Ni + Cu)/15 ;  
Pcm = C + Si/30 + (Mn + Cu + Cr)/20 + Ni/60 + Mo/15 + V/10 + B/5  
(1) POSIZIONE / LOCATION: 1 = TESTA / TOP ; 2 = PIEDE / BOTTOM  
(2) POSIZIONE / LOCATION: C = CUORE / 1/2 THICKNESS ; P = PELLE / SURFACE ; D = 1/4 SPESSORE / THICKNESS  
(3) DIREZIONE / DIRECTION: L = LONGITUDINALE / LONGITUDINAL ; T = TRASVERSALE / TRANSVERSE  
(4) FORMA DEL PROVINO / SHAPE OF TEST PIECE: P = PRISMATICO / PRISMATIC ; C = CILINDRICO / CYLINDRICAL  
(5) ESITO PROVA DI PIEGA / RESULT: OK = COMPLYING ; NO = NOT COMPLYING

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|                                      |                                          |
|--------------------------------------|------------------------------------------|
| A03 N° Certificato / Certificate no. | 202 Data / Date                          |
| 184855                               | 01/12/2022                               |
| A08 N° Ordine / Works order          | A09 N° Ordine cliente / Customer's order |
| 95222418                             | specification                            |
| DDT                                  | del / date                               |
| BOL 22017674                         | 24/11/2022                               |
| Pratica / File no.                   |                                          |
| del / date                           |                                          |
| B01/B02/B03 Prodotto / Product       | Spianati da Coil / Plates from Coil      |
| Qualità / Steel grade                | S235JR+N                                 |
| Normativa / Specification            | EN 10025-2:2019                          |

|                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------|
| A06 Cliente / Customer                                                                                                                            |
| Limited Liability Company "Metinvest-SMC"<br>Ostrozkykh Knyaziv st 8.<br>010010 Kyiv EE<br>UA                                                     |
| B06 Marcatura di prodotto / Marking of the product                                                                                                |
| PRODOTTI/ORDINE/N° INFORMAMENTO/DIMENSIONI/QUALITÀ/MARCHIO DEL PRODUTTORE<br>PRODUCT/ORDER/INTERNAL N°/DIMENSIONS/STEEL GRADE/MANUFACTURER'S MARK |

| B07 | B07         | B16        | B09/B11         | B12   | B07      | C70 | B04 | C00   | B05 | C00 | B05 PWHT          |                     |                 |                               |              |                |              | C00 | B05 Q+T                    |                       |                        |              |                       |                       |               |        |                     |                |          |        |                     |                    |                    |                     |       |           |                  |                    |                 |            |        |      |                         |            |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |    |
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|     |             |            |                 |       |          |     |     |       |     |     | N° CICLI / CYCLES | TEMPERATURA FINE °C | END TEMPERATURE | VELOCITA' RAFFREDDAMENTO °C/h | COOLING RATE | PERMANENZA Min | HOLDING TIME |     | TEMPERATURA TRATTAMENTO °C | TEMPERATURE TREATMENT | VELOCITA' RISCALDO C/h | HEATING RATE | TEMPERATURA INIZIO °C | BEGINNING TEMPERATURE | CAMPIONE PWHT | SAMPLE | TRATT. CAMPIONE (C) | HEAT TREATMENT | CAMPIONE | SAMPLE | STATO FORNITURA (B) | DELIVERY CONDITION | PROCESSO ELAB. (A) | STEELMAKING PROCESS | LOTTO | BATCH NO. | PESO TEORICO [t] | THEORETICAL WEIGHT | DIMENSIONI [mm] | DIMENSIONS | COLATA | HEAT | IDENTIFICATIVO PRODOTTO | PRODUCT ID | ITEM |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |    |
| 2   | CL22/19985A | A35/231965 | 16.00X1500X6000 | 45,46 | 90408990 | BO  | N*  | AM776 |     |     |                   |                     |                 |                               |              |                |              |     |                            |                       |                        |              |                       |                       |               |        |                     |                |          |        |                     |                    |                    |                     |       |           |                  |                    |                 |            |        |      |                         |            |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | </ |

## C71/C92 COMPOSIZIONE CHIMICA DI COLATA / HEAT CHEMICAL ANALYSIS

| B07            | C71  | C72  | C73  | C74   | C75   | C76   | C77   | C78   | C79  | C80   | C81   | C82   | C83   | C84 | C85 | C86    | C87 | C88 | C89   | C90   | C91   |
|----------------|------|------|------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-----|-----|--------|-----|-----|-------|-------|-------|
| COLATA<br>HEAT | C    | Mn   | Si   | P     | S     | Cu    | Ni    | Cr    | Mo   | Al    | V     | Nb    | Ti    | Sn  | Ca  | N      | B   | H   | Ceq1  | Ceq2  | Pcm   |
|                | %    | %    | %    | %     | %     | %     | %     | %     | %    | %     | %     | %     | %     | %   | %   | %      | %   | %   | % (D) | % (D) | % (D) |
| S235JR+N Min   |      |      |      |       |       |       |       |       |      |       |       |       |       |     |     |        |     |     |       |       |       |
| S235JR+N Max   | 0,17 | 1,40 |      | 0,035 | 0,035 | 0,550 |       |       |      |       |       |       |       |     |     | 0,0120 |     |     |       |       |       |
| A35/221619     | 0,08 | 0,86 | 0,02 | 0,015 | 0,011 | 0,010 |       | 0,020 | 0,00 | 0,047 | 0,001 | 0,001 | 0,002 |     |     | 0,0070 |     |     | 0,22  | 0,23  | 0,13  |
| A35/231965     | 0,09 | 0,91 | 0,01 | 0,021 | 0,009 | 0,020 | 0,010 | 0,020 | 0,00 | 0,032 | 0,001 | 0,002 | 0,002 |     |     | 0,0060 |     |     | 0,24  | 0,25  | 0,14  |
| A35/231988     | 0,09 | 0,87 | 0,02 | 0,022 | 0,011 | 0,020 | 0,010 | 0,020 |      | 0,050 | 0,002 | 0,002 | 0,002 |     |     | 0,0070 |     |     | 0,24  | 0,24  | 0,14  |
| A35/231992     | 0,09 | 0,80 | 0,02 | 0,016 | 0,012 | 0,020 | 0,010 | 0,020 |      | 0,050 | 0,002 | 0,002 | 0,002 |     |     | 0,0070 |     |     | 0,22  | 0,23  | 0,13  |

|                               |                                          | PROVA DI TRAZIONE<br>TENSILE TEST |                       |                          |                             |                               |                  |                |                                          | PROVA DI RESILIENZA<br>IMPACT TEST - CHARPY V-NOTCH<br>TEST |                          |                                      |                           |                                     | PROVA DI PIEGA<br>BEND TEST |                          |                                    | PROVA DI DUREZZA<br>HARDNESS TEST |                                     |             |            | PROVA DI STRIZIONE<br>Z% TEST       |                                  |                                    |
|-------------------------------|------------------------------------------|-----------------------------------|-----------------------|--------------------------|-----------------------------|-------------------------------|------------------|----------------|------------------------------------------|-------------------------------------------------------------|--------------------------|--------------------------------------|---------------------------|-------------------------------------|-----------------------------|--------------------------|------------------------------------|-----------------------------------|-------------------------------------|-------------|------------|-------------------------------------|----------------------------------|------------------------------------|
| C00                           |                                          | C01                               | C02                   | C03                      | C11                         | C12                           | C13              | C14            | C10                                      | C41                                                         | C02                      | C03                                  | C01                       | C42                                 | C43                         | C02                      | C51                                | C52                               | C53                                 | C01         | C30        | C32                                 | C53                              | C54                                |
| CAMPIONE<br>SAMPLE            | SPessore<br>PRODOTT<br>PRODUCT THICKNESS | POSIZIONE<br>LOCATION             | POSIZIONE<br>LOCATION | DIREZIONE<br>ORIENTATION | Reh [Mpa]<br>YIELD STRENGTH | ReH [Mpa]<br>TENSILE STRENGTH | A%<br>ELONGATION | PROOF STRENGTH | FORMA PROVINO (4)<br>SHAPE OF TEST PIECE | LARGHEZZA [mm]<br>WIDTH                                     | DIREZIONE<br>ORIENTATION | TEMPERATURA [°C]<br>TEST TEMPERATURE | POSIZIONE (2)<br>LOCATION | SINGOLI VALORI<br>INDIVIDUAL VALUES | MEAN VALUE                  | DIREZIONE<br>ORIENTATION | MANIPOLAZIONE [mm]<br>MANIPULATION | ANGOLO<br>ANGLE                   | SINGOLI VALORI<br>INDIVIDUAL VALUES | TEST METHOD | MEAN VALUE | SINGOLI VALORI<br>INDIVIDUAL VALUES | Z% VALORE MEDIO<br>Z% MEAN VALUE | Z% SINGOLI VALORI<br>Z% INDIVIDUAL |
|                               |                                          | (1)                               | (2)                   | (3)                      |                             |                               |                  |                |                                          |                                                             | (3)                      |                                      |                           |                                     |                             |                          | (3)                                | [mm]                              | [°]                                 |             |            |                                     |                                  |                                    |
| S235JR+N Min<br>16.01 - 25.00 |                                          |                                   |                       |                          |                             |                               |                  |                |                                          |                                                             | L                        | 20                                   |                           | 27                                  | 0                           |                          |                                    |                                   |                                     |             |            |                                     |                                  |                                    |
| S235JR+N Min<br>16.01 - 25.00 |                                          |                                   |                       | 20                       | 225                         | 360                           | 24               |                |                                          |                                                             |                          |                                      |                           |                                     |                             |                          |                                    |                                   |                                     |             |            |                                     |                                  |                                    |



|                               |                                         | PROVA DI TRAZIONE<br>TENSILE TEST |                              |                                 |                                         |           |          |                  |              | PROVA DI RESILIENZA<br>IMPACT TEST - CHARPY V-NOTCH<br>TEST |                |                                 |                                         |                              |                                     |            |                                 | PROVA DI PIEGA<br>BEND TEST |       |            |                     |                           | PROVA DI DUREZZA<br>HARDNESS TEST |                                     |            |                                              | PROVA DI STRIZIONE<br>Z% TEST    |  |
|-------------------------------|-----------------------------------------|-----------------------------------|------------------------------|---------------------------------|-----------------------------------------|-----------|----------|------------------|--------------|-------------------------------------------------------------|----------------|---------------------------------|-----------------------------------------|------------------------------|-------------------------------------|------------|---------------------------------|-----------------------------|-------|------------|---------------------|---------------------------|-----------------------------------|-------------------------------------|------------|----------------------------------------------|----------------------------------|--|
| C00                           |                                         | C01                               | C01                          | C02                             | C03                                     | C11       | C12      | C13              | C14          | C10                                                         | C41            | C02                             | C03                                     | C01                          | C42                                 | C43        | C02                             | C51                         | C52   | C50        | C01                 | C30                       | C31                               | C32                                 | C53        | C54                                          |                                  |  |
| CAMPIONE<br>SAMPLE            | SPESORE<br>PRODOTT<br>PRODUCT THICKNESS | POSIZIONE<br>LOCATION<br>(1)      | POSIZIONE<br>LOCATION<br>(2) | DIREZIONE<br>ORIENTATION<br>(3) | TEMPERATURA<br>TEST TEMPERATURE<br>[°C] | REH [Mpa] | RM [Mpa] | ELONGATION<br>A% | RP 0.2 [Mpa] | SHAPE OF TEST PIECE                                         | LARGHEZZA [mm] | DIREZIONE<br>ORIENTATION<br>(3) | TEMPERATURA<br>TEST TEMPERATURE<br>[°C] | POSIZIONE<br>LOCATION<br>(2) | SINGOLI VALORI<br>INDIVIDUAL VALUES | MEAN VALUE | DIREZIONE<br>ORIENTATION<br>(3) | MANDRINO [mm]               | ANGLE | ANGOLO [°] | ESITO (5)<br>RESULT | POSIZIONE (2)<br>LOCATION | METODO<br>TEST METHOD             | SINGOLI VALORI<br>INDIVIDUAL VALUES | MEAN VALUE | Z% SINGOLI VALORI<br>Z% INDIVIDUAL<br>VALUES | Z% VALORE MEDIO<br>Z% MEAN VALUE |  |
| S235JR+N Max<br>16.01 - 25.00 |                                         |                                   |                              |                                 | 20                                      | 510       | 510      |                  |              |                                                             |                |                                 |                                         |                              |                                     |            |                                 |                             |       |            |                     |                           |                                   |                                     |            |                                              |                                  |  |
| S235JR+N Min<br>3.01 - 16.00  |                                         |                                   |                              |                                 |                                         |           |          |                  |              |                                                             |                | L                               | 20                                      |                              | 27                                  | 0          |                                 |                             |       |            |                     |                           |                                   |                                     |            |                                              |                                  |  |
| S235JR+N Min<br>3.01 - 16.00  |                                         |                                   |                              |                                 | 20                                      | 235       | 360      | 24               |              |                                                             |                |                                 |                                         |                              |                                     |            |                                 |                             |       |            |                     |                           |                                   |                                     |            |                                              |                                  |  |
| S235JR+N Max<br>3.01 - 16.00  |                                         |                                   |                              |                                 | 20                                      | 510       | 510      |                  |              |                                                             |                |                                 |                                         |                              |                                     |            |                                 |                             |       |            |                     |                           |                                   |                                     |            |                                              |                                  |  |
|                               |                                         |                                   |                              |                                 |                                         |           |          |                  |              |                                                             |                |                                 |                                         |                              |                                     |            |                                 |                             |       |            |                     |                           |                                   |                                     |            |                                              |                                  |  |
| AM776                         | 16,00                                   | 2                                 | P                            | T                               | 20                                      | 309       | 449      | 0,69             | 37           | P                                                           | 10,00          | L                               | 20                                      | P                            | 284 302 256                         | 281        |                                 |                             |       |            |                     |                           |                                   |                                     |            |                                              |                                  |  |
| AM779                         | 16,00                                   | 2                                 | P                            | T                               | 20                                      | 328       | 374      | 0,88             | 38           | P                                                           | 10,00          | L                               | 20                                      | P                            | 296 303 285                         | 294        |                                 |                             |       |            |                     |                           |                                   |                                     |            |                                              |                                  |  |
| AM780                         | 16,00                                   | 2                                 | P                            | T                               | 20                                      | 294       | 381      | 0,77             | 39           | P                                                           | 10,00          | L                               | 20                                      | P                            | 320 263 291                         | 291        |                                 |                             |       |            |                     |                           |                                   |                                     |            |                                              |                                  |  |
| AM947                         | 20,00                                   | 2                                 | P                            | T                               | 20                                      | 331       | 433      | 0,76             | 39           | P                                                           | 10,00          | L                               | 20                                      | P                            | 290 300 297                         | 296        |                                 |                             |       |            |                     |                           |                                   |                                     |            |                                              |                                  |  |

C10

UNI EN ISO 6892-1:2009/ UNI EN ISO 148-1:2011

| Z01  |                                                  |                                               |                                                |                                           |                       |
|------|--------------------------------------------------|-----------------------------------------------|------------------------------------------------|-------------------------------------------|-----------------------|
| ITEM | TOLLERANZA DI SPESSORE<br>TOLERANCE ON THICKNESS | TOLLERANZE DI LARGHEZZA<br>TOLERANCE ON WIDTH | TOLLERANZE DI LUNGHEZZA<br>TOLERANCE ON LENGTH | CONDIZIONI SUPERFICIALI<br>SURFACE FINISH | PLANARITÀ<br>FLATNESS |
| 2    | EN 10051 Class A -0.42 +0.42 MM                  | EN10051 -0 +20 MM                             | EN 10051 -0 +30 MM                             | EN 10163/2:2004 CL A1                     | EN 10051:2010         |
| 4    | EN 10051 Class A -0.42 +0.42 MM                  | EN10051 -0 +20 MM                             | EN 10051 -0 +30 MM                             | EN 10163/2:2004 CL A1                     | EN 10051:2010         |

CERTIFICHIAMO che i prodotti elencati sono conformi alla prescrizione dell'ordine, che i controlli della marcatura, dell'aspetto superficiale e dimensionale hanno dato esito positivo.  
 WE CERTIFY that the above mentioned products are consistent with the order prescriptions: marking, inspection and measurement without objection.  
 DICHIARIAMO CHE I PRODOTTI SONO STATI CONTROLLATI IN ACCORDO ALLA NORMATIVA VIGENTE E CHE LE RADIAZIONI IONIZZANTI NON ECCEDONO IL VALORE DEL FONDO NATURALE.  
 WE DECLARE THAT THE PRODUCTS WERE CONTROLLED ACCORDING TO STANDARD AND RADIATION DO NOT EXCEED THE NATURAL RADIATION.

| Z06 |                                                                    |                                                                         |
|-----|--------------------------------------------------------------------|-------------------------------------------------------------------------|
| Z07 | Z03 ENTE COLLAUDO / INSPECTION BODY                                | Z02                                                                     |
|     | TIMBRO DELL'ISPETTORE<br>STAMP OF THE INSPECTION<br>REPRESENTATIVE | Ferrera<br><b>VALSIDER S.p.A.</b><br>CONTROLLO QUALITÀ<br>Spres Roberto |

| Z04                                                                                |                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Prodotti conformi ai requisiti della marcatura CE. Certificato di conformità CE n° 0948-CPR-0015 emesso da TÜV Italia srl.<br>Products in compliance with CE marking requirements. Certificate of conformity N° 0948-CPR-0015 from TÜV Italia srl. |







**СЕРТИФІКАТ ЯКОСТІ № 5-857/2**



ТОВ "ДМЗ КОМІНМЕТ"

Виробник: 49023, м. Дніпро, вул. Яхненківська, 7

Дата: 26.06.2023

Машина № АЕ3872ОН

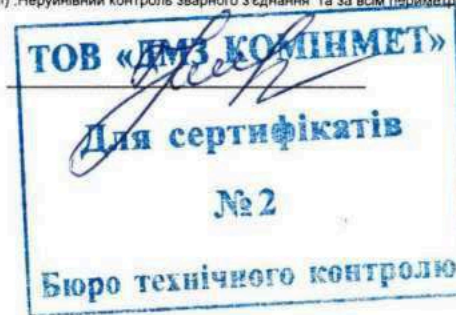
Вантажоодержувач: ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ "МЕТІНВЕСТ-СМЦ"

Заказ № 09/154-2022  
000004212

| № пакета                                                             | № партії | Г р у п а | Серія | Марка сталі | № плавки  | К л а с | Розміри, мм |         |       | Маса, т. | Кількість, од. | Метраж м. | Хімічний склад % |           |           |           |           |         | Механічні властивості  |                         |               |                                           | Технологічні властивості |     |                        |              |            |      |                         |                                       |          |          |          |
|----------------------------------------------------------------------|----------|-----------|-------|-------------|-----------|---------|-------------|---------|-------|----------|----------------|-----------|------------------|-----------|-----------|-----------|-----------|---------|------------------------|-------------------------|---------------|-------------------------------------------|--------------------------|-----|------------------------|--------------|------------|------|-------------------------|---------------------------------------|----------|----------|----------|
|                                                                      |          |           |       |             |           |         | Діаметр     | Товщина | Довж. |          |                |           | C<br>100         | Mn<br>100 | Si<br>100 | S<br>1000 | P<br>1000 | Se<br>% | Границя міцності Н/мм2 | Границя плинності Н/мм2 | Видовження, % | Границя міцності зварного з'єднання Н/мм2 | Ударна в'язкість         |     |                        | Сплюсцування | Роздавання | Згин | Неруйнівний контроль, % | Гідровипробування, % Р-2,4 МПа, 5 сек |          |          |          |
|                                                                      |          |           |       |             |           |         |             |         |       |          |                |           |                  |           |           |           |           |         |                        |                         |               |                                           | КCU                      | KCV | Наслідки мех. старіння |              |            |      |                         |                                       |          |          |          |
|                                                                      |          |           |       |             |           |         |             |         |       |          |                |           |                  |           |           |           |           |         |                        |                         |               |                                           |                          |     |                        |              |            |      |                         |                                       | t Дж/см2 | t Дж/см2 | t Дж/см2 |
| НД: ДСТУ 8936:2019                                                   |          |           |       |             |           |         |             |         |       |          |                |           |                  |           |           |           |           |         |                        |                         |               |                                           |                          |     |                        |              |            |      |                         |                                       |          |          |          |
| Найменування продукції: Труби сталеві електрозварні бодогазопровідні |          |           |       |             |           |         |             |         |       |          |                |           |                  |           |           |           |           |         |                        |                         |               |                                           |                          |     |                        |              |            |      |                         |                                       |          |          |          |
| к0714792                                                             | 11806    |           | Легка | 2ПС         | 623150-8  |         | 50          | 3       | 6     | 0,213    | 8              | 48        | 12               | 39        | 1,6       | 40        | 25        |         | 402 / 407              | 343 / 348               | 33 / 33       |                                           |                          |     |                        |              |            |      |                         |                                       |          | 100      | гарант.  |
| к0714778                                                             | 11802    |           | Легка | 2ПС         | 1223075-2 |         | 50          | 3       | 6     | 0,31     | 10             | 60        | 13               | 40        | 1,6       | 27        | 13        |         | 397 / 402              | 348 / 353               | 38 / 38       |                                           |                          |     |                        |              |            |      |                         |                                       |          | 100      | гарант.  |
| к0714793-с                                                           | 11807    |           | Легка | 2ПС         | 623150-8  |         | 50          | 3       | 6     | 0,213    | 8              | 48        | 12               | 39        | 1,6       | 40        | 25        |         | 402 / 407              | 343 / 348               | 33 / 33       |                                           |                          |     |                        |              |            |      |                         |                                       |          | 100      | гарант.  |
| НД: ДСТУ 8940:2019                                                   |          |           |       |             |           |         |             |         |       |          |                |           |                  |           |           |           |           |         |                        |                         |               |                                           |                          |     |                        |              |            |      |                         |                                       |          |          |          |
| Найменування продукції: Труби сталеві електрозварні профільні        |          |           |       |             |           |         |             |         |       |          |                |           |                  |           |           |           |           |         |                        |                         |               |                                           |                          |     |                        |              |            |      |                         |                                       |          |          |          |
| к0715089                                                             | 11894    | В         |       | 2ПС         | 813091-1  |         | 60x60       | 4       | 6     | 3,361    | 80             | 480       | 14               | 39        | 1,4       | 35        | 14        |         | 377 / 382              |                         | 41 / 41       |                                           |                          |     |                        |              |            |      |                         |                                       |          | 100      |          |
| к0715086                                                             | 11894    | В         |       | 2ПС         | 813091-1  |         | 60x60       | 4       | 6     | 3,358    | 80             | 480       | 14               | 39        | 1,4       | 35        | 14        |         | 377 / 382              |                         | 41 / 41       |                                           |                          |     |                        |              |            |      |                         |                                       |          | 100      |          |
| к10510501                                                            | 53049    | В         |       | 3ПС         | 613209    |         | 100x100     | 4       | 12    | 4,119    | 30             | 360       | 15               | 37        | 1,9       | 30        | 27        |         | 407 / 412              |                         | 38 / 38       |                                           |                          |     |                        |              |            |      |                         |                                       |          | 100      |          |
| к10510513                                                            | 53052    | В         |       | 3ПС         | 613209-9  |         | 100x100     | 5       | 12    | 4,175    | 25             | 300       | 15               | 37        | 1,9       | 30        | 27        |         | 402 / 402              |                         | 39 / 40       |                                           |                          |     |                        |              |            |      |                         |                                       |          | 100      |          |
| к10510044                                                            | 52935    | В         |       | 3ПС         | 1023067-9 |         | 120x120     | 4       | 12    | 3,368    | 20             | 240       | 19               | 39        | 1,9       | 28        | 33        |         | 421 / 426              |                         | 36 / 37       |                                           |                          |     |                        |              |            |      |                         |                                       |          | 100      |          |
| Кількість пакетів : 8 од. Загальна маса пакетів : 19,117 т.          |          |           |       |             |           |         |             |         |       |          |                |           |                  |           |           |           |           |         |                        |                         |               |                                           |                          |     |                        |              |            |      |                         |                                       |          |          |          |

Вказана у сертифікаті продукція звичайною точністю виготовлення, без термообробки, виготовлена високочастотним зварюванням з одним поздовжнім швом та відповідає діючим в Україні нормативним документам. Контроль розмірів і якості поверхні проводять з застосуванням методики статистичного контролю на 5% труб (але не менше ніж 5 труб від партії). Неруйнівний контроль зварного з'єднання та за всім периметром труби, метод ET, вихрострумовий. Продукція виготовлена з нелегированої сталі. З питань якості посилайтеся на № сертифікату.

Підпис експерта  
Штамп експерта





Відповідність системи менеджменту якості вимогам стандарту ISO 9001:2015 при виробництві товарної продукції аглодоменого, сталеплавильного, прокатного переділів підтверджено органом з оцінки відповідності Intertek Certification Limited, Великобританія, DE 24 8ZF, Дербі, 10A Вікторі Парк, Вікторі Роуд (сертифікат №0104123 від 06.08.2020 р)  
Intertek Certification Limited, 10A Victory Park, Victory Road, Derby DE24 8ZF, United Kingdom (the certificate № 0104123 dd. 06.08.2020), has confirmed quality management system compliance with the requirements of ISO 9001:2015 in the manufacture of market products of sintering, steelmaking, rolling production



## СЕРТИФИКАТ КАЧЕСТВА № 1348

3.1 EN 10204:2004

Продавец (экспортёр)

05393085

Грузополучатель, адрес, страна

ФІЛІЯ ТОВ «МЕТІНВЕСТ-СМЦ» в м. ДНІПРО  
Україна, 52012, ДНІПРОПЕТРОВСЬКА ОБЛ., С. ПАРТИЗАНСЬКЕ, ВУЛ. ЗАВОД-  
СЬКА, Б. 25  
УКРАЇНА

Ватон

№ 53606802

Заказ на

производство

№ 2290128057

Контракт

от

Спецификация №

дополнительная

лот

дополнительная

| Наименование продукции                     |                |               |                       |       | НД                                                                               |               | Вид грузового места, код |                    | Способ выплавки |        |        |
|--------------------------------------------|----------------|---------------|-----------------------|-------|----------------------------------------------------------------------------------|---------------|--------------------------|--------------------|-----------------|--------|--------|
| Прокат угловой равнополочный горячекатаный |                |               |                       |       | ДСТУ 2651:2005(ГОСТ380-2005)<br>ДСТУ 2251-2018<br>ДСТУ 4484:2005 (ГОСТ 535-2005) |               | Пачки                    |                    | Конвертерный    |        |        |
|                                            |                |               |                       |       | Размеры, мм                                                                      |               | Ед. изм. код             | Кол-во товара, шт. | Масса, т        |        |        |
|                                            |                |               |                       |       | Диаметр, сечение профиля                                                         |               |                          |                    | Длина           |        | брутто |
| № п-п                                      | Номера плавков | Номера партий | Углеродный эквивалент | Марка |                                                                                  |               |                          |                    |                 |        |        |
| 1                                          | 221341         | 1600          | -                     | Ст3пс | 80х80х6                                                                          | 12000 +200/-0 | Пачки,728                | 11                 | 50.529          | 50.284 |        |
| 2                                          | 221340         | 1602          | -                     | Ст3пс | 80х80х6                                                                          | 12000 +200/-0 | Пачки,728                | 3                  | 14.555          | 14.515 |        |
|                                            |                |               |                       |       |                                                                                  |               |                          |                    | 14              | 65.084 | 64.799 |

### Показатели качества товара

| Химический состав по ковшевой пробе, % |                         |                                |                       |                     |           |      |                  |                          |                |              |       |    |       |       |       |   |       |    |  |
|----------------------------------------|-------------------------|--------------------------------|-----------------------|---------------------|-----------|------|------------------|--------------------------|----------------|--------------|-------|----|-------|-------|-------|---|-------|----|--|
| № п-п                                  | C                       | Mn                             | Si                    | S                   | P         | Cr   | Ni               | Cu                       | Ti             | Al           | V     | Nb | N     | As    | Mo    | B | Sn    | Sb |  |
| 1                                      | 0,16                    | 0,46                           | 0,14                  | 0,004               | 0,018     | 0,04 | 0,04             | 0,06                     | -              | 0,003        | 0,001 | -  | 0,008 | 0,002 | 0,005 | - | 0,005 | -  |  |
| 2                                      | 0,16                    | 0,43                           | 0,13                  | 0,009               | 0,022     | 0,04 | 0,03             | 0,05                     | -              | 0,003        | 0,001 | -  | 0,008 | 0,002 | 0,005 | - | 0,003 | -  |  |
| Механические свойства                  |                         |                                |                       |                     |           |      |                  |                          |                |              |       |    |       |       |       |   |       |    |  |
| № п-п                                  | Предел текучести, Н/мм2 | Временное сопротивление, Н/мм2 | Относит. удлинение, % | Относит. сужение, % | Твердость |      | Работа удара, Дж | Ударная вязкость, Дж/см2 |                | Испыб. Иалом |       |    |       |       |       |   |       |    |  |
|                                        |                         |                                |                       |                     | НВ        | НRC  |                  | При тем-ре,              | После мех.стар |              |       |    |       |       |       |   |       |    |  |
| 1                                      | 343                     | 466                            | 32,50                 | -                   | -         | -    | -                | U-20 114.0               | 79,0           | УА           |       |    |       |       |       |   |       |    |  |
|                                        | -                       | -                              | -                     | -                   | -         | -    | -                | 119.0                    | 89,0           | -            |       |    |       |       |       |   |       |    |  |
|                                        | -                       | -                              | -                     | -                   | -         | -    | -                | 114.0                    | 99,0           | -            |       |    |       |       |       |   |       |    |  |
|                                        | -                       | -                              | -                     | -                   | -         | -    | -                | 107.0                    | 91,0           | -            |       |    |       |       |       |   |       |    |  |
| 2                                      | 309                     | 451                            | 37,50                 | -                   | -         | -    | -                | U-20 102.0               | 74,0           | УА           |       |    |       |       |       |   |       |    |  |
|                                        | -                       | -                              | -                     | -                   | -         | -    | -                | 99.0                     | 104,0          | -            |       |    |       |       |       |   |       |    |  |
|                                        | -                       | -                              | -                     | -                   | -         | -    | -                | 94.0                     | 84,0           | -            |       |    |       |       |       |   |       |    |  |
|                                        | -                       | -                              | -                     | -                   | -         | -    | -                | 114.0                    | 83,0           | -            |       |    |       |       |       |   |       |    |  |



Коп. 10 штук в пачке

Прочие сведения

Приложение

Спецификация

Товар соответствует указанным в документе характеристикам качества, техническим условиям и требованиям контракта.

2 деревянные подкладки 0,04х0,10х2,8м массой 0,015тн. Общий вес с учетом сепарации - 65,099тн.

Категория 5.



Дата 18.04.2022  
Подпись: М.И.О.  
Милосва Н.Ю.

# СЕРТИФІКАТ ЯКОСТІ № 5-971/2



Виробник: ТОВ "ДМЗ КОМІНМЕТ"  
49023, м. Дніпро, вул. Яхненківська,7

Дата: 04.05.2023

Машина № BA7860BI

Вантажоодержувач: ТОВАРИСТВО З ОБМЕЖЕНОЮ ВІДПОВІДАЛЬНІСТЮ "МЕТІНВЕСТ-СМЦ"

Заказ № 09/154-2022  
000004720

| № пакета                                                      | № партії | Г р у п а | Серія | Марка сталі | № плавки | К л а с | Розміри, мм |         |       | Маса, т. | Кількість, од. | Метраж м. | Хімічний склад % |          |          |          |          | Механічні властивості |                        |                         |               | Технологічні властивості                  |                  |     |                        |              |            |      |                         |                                       |   |        |   |        |   |        |  |           |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |    |  |
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|                                                               |          |           |       |             |          |         | Діаметр     | Товщина | Довж. |          |                |           | С х 100          | Mn x 100 | Si x 100 | S x 1000 | Р х 1000 | Се %                  | Границя міцності Н/мм2 | Границя плинності Н/мм2 | Видовження. % | Границя міцності зварного з'єднання Н/мм2 | Ударна в'язкість |     |                        | Сплюсцування | Роздавання | Згин | Неруйнівний контроль. % | Гідровипробування, % Р-3,0 МПа, 5 сек |   |        |   |        |   |        |  |           |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |    |  |
|                                                               |          |           |       |             |          |         |             |         |       |          |                |           |                  |          |          |          |          |                       |                        |                         |               |                                           | КCU              | KCV | Наслідки мех. старіння |              |            |      |                         |                                       |   |        |   |        |   |        |  |           |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |    |  |
|                                                               |          |           |       |             |          |         |             |         |       |          |                |           |                  |          |          |          |          |                       |                        |                         |               |                                           |                  |     |                        |              |            |      |                         |                                       | t | Дж/см2 | t | Дж/см2 | t | Дж/см2 |  |           |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |    |  |
| НД: ДСТУ 8940:2019                                            |          |           |       |             |          |         |             |         |       |          |                |           |                  |          |          |          |          |                       |                        |                         |               |                                           |                  |     |                        |              |            |      |                         |                                       |   |        |   |        |   |        |  |           |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |    |  |
| Найменування продукції: Труби сталеві електрозварні профільні |          |           |       |             |          |         |             |         |       |          |                |           |                  |          |          |          |          |                       |                        |                         |               |                                           |                  |     |                        |              |            |      |                         |                                       |   |        |   |        |   |        |  |           |  |  |  |         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |    |  |
| к0256838                                                      |          | 52091     |       | В           |          |         |             | 2ПС     |       | 723098   |                |           |                  | 120x60   |          | 4        |          | 12                    |                        | 4,649                   |               | 36                                        |                  | 432 |                        | 14           |            | 37   |                         | 2                                     |   | 24     |   | 11     |   |        |  | 397 / 402 |  |  |  | 40 / 41 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | </ |  |

Вказана у сертифікаті продукція звичайною точністю виготовлення, без термообробки, виготовлена високочастотним зварюванням з одним поздовжнім швом та відповідає діючим в Україні нормативним документам.  
Контроль розмірів і якість поверхні проводять з застосуванням методики статистичного контролю на 5% труб (але не менше ніж 5 труб від партії) .Неруйнівний контроль зварного з'єднання та за всім периметром труби, метод ЕТ, вихрострумовий.  
Продукція виготовлена з нелегованої сталі  
З питань якості посилайтеся на № сертифікату.

Підпис експерта  
Штамп експерта



A04



A03 № 3130036196 / 2023.10.10

page 1 of 1

A02 Inspection certificate EN 10204 / 3.1

A01 HUS LTD  
1 Industrialna Str.  
3600 Lom, Bulgaria

B01 Cold formed welded structural hollow sections of non-alloy  
and fine grain steels БДС EN 10219-2

A07 Order №

A06 Customer.....THYSSENKRUPP MATERIALS  
ROMANIA SRL

A10 Invoice № 3130036196

B02 EN 10219-1 S355J2H

B09 CFRHS option 1.1; 1.4

B11 672 m.

B13

|     |                 |     |           |     |        |     |  |     |               |     |          |
|-----|-----------------|-----|-----------|-----|--------|-----|--|-----|---------------|-----|----------|
| B09 | CFRHS 120x60x4  | B10 | 12000 mm. | B11 | 288 m. | B13 |  | B06 | 0003257598989 | B07 | 385888   |
| B09 | CFRHS 100x100x5 | B10 | 12000 mm. | B11 | 192 m. | B13 |  | B06 | 0003261620989 | B07 | 22106032 |
| B09 | CFRHS 100x100x5 | B10 | 12000 mm. | B11 | 192 m. | B13 |  | B06 | 0003261604989 | B07 | 22305942 |

C71 Chemical composition %

| B06             | B07      | C    | Mn  | Si | P  | S     | Al | Cu | Cr   | Ni | Mo | Ti    | Nb | N | CEV 2 |
|-----------------|----------|------|-----|----|----|-------|----|----|------|----|----|-------|----|---|-------|
| Bundle №        | Heat №   | x100 |     |    |    | x1000 |    |    | x100 |    |    | x1000 |    |   | x100  |
| 000325759898940 | 385888   | 11   | 101 | 1  | 14 | 5     |    |    |      |    |    |       |    | 6 | 29    |
| 000326162098920 | 22106032 | 6    | 130 | 1  | 17 | 14    |    |    |      |    |    |       |    | 9 | 35    |
| 000326160498920 | 22305942 | 8    | 125 | 2  | 17 | 8     |    |    |      |    |    |       |    | 9 | 36    |

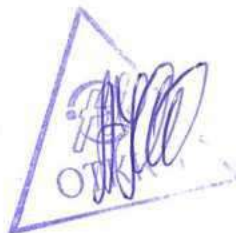
| B07      | C51 Mechanical properties |          |            |           |        |          |                            |              |
|----------|---------------------------|----------|------------|-----------|--------|----------|----------------------------|--------------|
| Heat №   | C00                       |          | C11        | C12       | C13    | C41      | C42                        | C43          |
|          | Certificate №             | Test №   | ReH<br>MPa | Rm<br>MPa | A<br>% | KV<br>mm | Impact test<br>J / T -20°C | J<br>Average |
| 385888   | 60943                     | 3F18069  | 523        | 577       | 25     |          | 0                          |              |
| 22106032 | 4389                      | 21073232 | 499        | 526       | 38     |          | 0                          |              |
| 22305942 | 4389                      | 21073229 | 466        | 525       | 25     |          | 0                          |              |

D02 Non-destructive testing - pass.

Z02 Z03 Director Branch Lom  
N.Dechev  
Date 10.10.2023  
Seal HUS LTD.



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A05 AK

D01 The test has been performed on the provided products and the results are satisfactory.

Z01 The producer declares that the product is according to the customer's order.

Z05 Without any post heat treatment; with shape, dimensions and tolerances according БДС EN 10219-2; performance characteristics according appendix ZA.1 of the product standart. Function - for steel structures and combined steel and reinforced concrete structures.

Z06 Claims are allowed within 14 days from product receipt. In order to consider a claim, the customer must provide a quality inspection control document and a marking on the claimed goods. Claims associated with unloading and storage of the goods will not be accepted.

Z07 Declaration of performance №3130036196HUS CFRHS S355J2H /2023

A04



A03 № 3130036196 / 2023.10.10

page 1 of 1

A01

HUS LTD

1 Industrialna Str.  
3600 Lom, Bulgaria

A02 Inspection certificate EN 10204 / 3.1

B01

**Cold formed welded structural hollow sections of non-alloy  
and fine grain steels БДС EN 10219-2**

A07

Order №

A06

Customer.....**THYSSENKRUPP MATERIALS ROMANIA  
SRL.....**

A10

Invoice № 3130036196

B02

**EN 10219-1 S235JRH**

B09

**CFRHS**

option 1.1 ; 1.4

B09

B11

**1 068 m.**

B13

|     |                 |     |           |     |        |     |  |     |               |     |           |
|-----|-----------------|-----|-----------|-----|--------|-----|--|-----|---------------|-----|-----------|
| B09 | CFRHS 120x120x3 | B10 | 12000 mm. | B11 | 192 m. | B13 |  | B06 | 0003236799989 | B07 | 730212094 |
| B09 | CFRHS 120x120x4 | B10 | 12000 mm. | B11 | 192 m. | B13 |  | B06 | 0003235866989 | B07 | 523291-9  |
| B09 | CFRHS 120x120x4 | B10 | 12000 mm. | B11 | 192 m. | B13 |  | B06 | 0003235818989 | B07 | 122189    |
| B09 | CFRHS 120x120x5 | B10 | 12000 mm. | B11 | 192 m. | B13 |  | B06 | 0003240127989 | B07 | 813189    |
| B09 | CFRHS 120x120x5 | B10 | 12000 mm. | B11 | 192 m. | B13 |  | B06 | 0003247902989 | B07 | 131956-1  |
| B09 | CFRHS 150x150x6 | B10 | 12000 mm. | B11 | 108 m. | B13 |  | B06 | 0003244818989 | B07 | 436371    |

C71 Chemical composition %

| B06             | B07       | C    | Mn | Si | P     | S  | Al | Cu   | Cr | Ni | Mo    | Ti | Nb | N    | CEV 2 |
|-----------------|-----------|------|----|----|-------|----|----|------|----|----|-------|----|----|------|-------|
| Bundle №        | Heat №    | x100 |    |    | x1000 |    |    | x100 |    |    | x1000 |    |    | x100 |       |
| 000323679998940 | 730212094 | 4    | 10 | 1  | 9     | 6  |    |      |    |    |       |    |    | 4    | 19    |
| 000323586698950 | 523291-9  | 12   | 38 | 2  | 25    | 25 |    |      |    |    |       |    |    | 9    | 20    |
| 000323581898950 | 122189    | 14   | 46 | 1  | 11    | 25 |    |      |    |    |       |    |    | 9    | 23    |
| 000324012798930 | 813189    | 13   | 37 | 2  | 23    | 25 |    |      |    |    |       |    |    | 9    | 21    |
| 000324790298950 | 131956-1  | 11   | 49 | 1  | 14    | 25 |    |      |    |    |       |    |    | 9    | 21    |
| 000324481898920 | 436371    | 9    | 76 | 1  | 12    | 5  |    |      |    |    |       |    |    | 3    | 22    |

| B07       | C51 Mechanical properties |            |     |     |     |
|-----------|---------------------------|------------|-----|-----|-----|
| Heat №    | C00                       |            | C11 | C12 | C13 |
|           | Certificate №             | Test №     | ReH | Rm  | A   |
|           |                           |            | MPa | MPa | %   |
| 730212094 | 219054                    | 7708085    | 260 | 364 | 40  |
| 523291-9  | 527801                    | 414446-16  | 275 | 431 | 36  |
| 122189    | 532858                    | 412281-5   | 270 | 402 | 36  |
| 813189    | 525229                    | 412648-5   | 289 | 422 | 31  |
| 131956-1  | 524849                    | 412445-15  | 265 | 368 | 38  |
| 436371    | 23400896                  | 2216945000 | 290 | 415 | 38  |

D02 Non-destructive testing - passed.

Z02 Z03 Director Branch Lom

N.Dechev

Date 10.10.2023

Seal HUS LTD.



Z04



1938

17

1938-CPR-0285/2



A05 AK

D01 The test has been performed on the provided products and the results are satisfactory.

Z01 The producer declares that the product is according to the customer's order.

Z05 Without any post heat treatment; with shape, dimensions and tolerances according БДС EN 10219-2; performance characteristics according appendix ZA.1 of the product standart. Function - for steel structures and combined steel and reinforced concrete structures.

Z06 Claims are allowed within 14 days from product receipt. In order to consider a claim, the customer must provide a quality inspection control document and a marking on the claimed goods. Claims associated with unloading and storage of the goods will not be accepted.

Z07 Declaration of performance №3130036196HUS CFRHS S235JRH /2023  
Declaration of performance №3130036196HUS CFCHS S235JRH /2023





СЕРТИФІКАТ ВИПРОБУВАНЬ № 2-1207 від 28.04.2022  
INSPECTION CERTIFICATE  
(EN 10204 - 3.1)

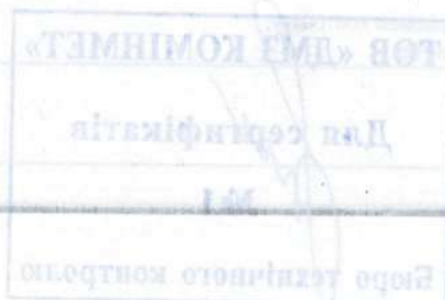


|                                                                                                                                                                                                                                    |       |      |                                                      |             |              |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|------------------------------------------------------|-------------|--------------|------------|
| Виробник:<br>Producer:                                                                                                                                                                                                             |       |      | Контракт №<br>Contract                               | 09/137-2022 | Дата<br>Date | 04.04.2022 |
| ТОВ "ДМЗ КОМІНМЕТ"<br>LLC "DMZ KOMINMET"<br>7, Yakhnenkivska St. 49023<br>Dnipro, Ukraine<br><br>Споживач, адреса, країна:<br>Consumer, address, country:<br><br>Метінвест-СМЦ ТОВ<br>01015, м.Київ, вул.Лейпцизька, Будинок № 15А |       |      |                                                      |             |              |            |
|                                                                                                                                                                                                                                    |       |      | Доповнення до контракту:<br>Addendum to the contract |             |              |            |
|                                                                                                                                                                                                                                    |       |      |                                                      |             |              |            |
| Дата відвантаження<br>Ship Date                                                                                                                                                                                                    | 28.04 | 2022 |                                                      |             |              |            |
| Машина №<br>Carriage                                                                                                                                                                                                               |       |      | Замовлення №<br>Order                                | 000002019   | Дата<br>Date |            |

|                                                                                                                                                        |                                          |                                         |                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|-----------------------------------------|------------------------------------------|
| Найменування продукції<br>Discription of goods                                                                                                         | Стандарт<br>Standart                     | Вид вантаж.<br>місця<br>Type of package | Кіл-сть<br>місць<br>Quantity of packages |
| Порожністі зварні профілі з конструкційних сталей<br>холодно-виготовлені профільні<br>Cold formed welded structural hollow sections of non-alloy steel | DIN EN 10219-1:2006, DIN EN 10219-2:2019 | Bundles                                 | 66                                       |

| Номер партії<br>Lot № | Номер плавки<br>Heat № | Марка сталі<br>Steel grade | Розміри, мм<br>Dimensions, mm |                        |                   | Кіл. труб<br>од.<br>Q-ty of pipes, pcs | Кіл. метрів<br>Q-ty of meters, m | Кіл-сть пакетів<br>Q-ty of packages | Маса, т.<br>Mass, mt |
|-----------------------|------------------------|----------------------------|-------------------------------|------------------------|-------------------|----------------------------------------|----------------------------------|-------------------------------------|----------------------|
|                       |                        |                            | Діаметр<br>O.D. of I.D.       | Товщина стінки<br>W.T. | Довжина<br>Length |                                        |                                  |                                     |                      |
| 1                     | 1012155-1              | S235JRH                    | 100x100                       | 4,00                   | 12 000            | 100                                    | 1 200                            | 4                                   | 13,791               |
| 2                     | 622140                 | S235JRH                    | 120x120                       | 3,00                   | 12 000            | 32                                     | 384                              | 2                                   | 4,401                |
| 3                     | 120630                 | S235JRH                    | 120x120                       | 4,00                   | 12 000            | 48                                     | 576                              | 3                                   | 8,227                |
| 4                     | 512163-8               | S235JRH                    | 120x120                       | 6,00                   | 12 000            | 28                                     | 336                              | 2                                   | 6,936                |
| 5                     | 120639                 | S235JRH                    | 140x140                       | 4,00                   | 12 000            | 312                                    | 3 744                            | 26                                  | 62,522               |
| 6                     | 512163-8               | S235JRH                    | 160x160                       | 6,00                   | 12 000            | 15                                     | 180                              | 2                                   | 4,973                |
| 7                     | 822098                 | S235JRH                    | 160x160                       | 8,00                   | 12 000            | 54                                     | 648                              | 6                                   | 23,747               |
| 8                     | 120630                 | S235JRH                    | 200x200                       | 6,00                   | 12 000            | 126                                    | 1 512                            | 14                                  | 52,488               |
| 9                     | 622140                 | S235JRH                    | 80x80                         | 3,00                   | 12 000            | 180                                    | 2 160                            | 5                                   | 16,296               |
| 10                    | 1012155-1              | S235JRH                    | 80x80                         | 4,00                   | 12 000            | 72                                     | 864                              | 2                                   | 7,898                |
| Разом :               |                        |                            |                               |                        |                   | 967                                    | 11 604                           | 66                                  | 201,279              |
| Всього :              |                        |                            |                               |                        |                   | 967                                    | 11 604                           | 66                                  | 201,279              |

Продовження дивись з оборотної сторони РТО







СЕРТИФІКАТ ВИПРОБУВАНЬ № 2-1207 від 28.04.2022  
INSPECTION CERTIFICATE  
(EN 10204 - 3.1)



Результати випробувань

Test result

| Хімічний склад %   |                            |          |          |           |           |          |          |          |           |           | Chemical steel composition |           |           |           |           |          |  |
|--------------------|----------------------------|----------|----------|-----------|-----------|----------|----------|----------|-----------|-----------|----------------------------|-----------|-----------|-----------|-----------|----------|--|
| № плавки<br>Heat № | Масова частка елементів, % |          |          |           |           |          |          |          |           |           | Element mass fraction, %   |           |           |           |           |          |  |
|                    | C                          | Mn       | Si       | S         | P         | Cr       | Ni       | Cu       | Ti        | As        | Al löslich                 | Nb        | V         | Mo        | N         | CEV      |  |
|                    | x<br>100                   | x<br>100 | x<br>100 | x<br>1000 | x<br>1000 | x<br>100 | x<br>100 | x<br>100 | x<br>1000 | x<br>1000 | x<br>1000                  | x<br>1000 | x<br>1000 | x<br>1000 | x<br>1000 | x<br>100 |  |
| 1012155-1          | 12                         | 37       | 1,4      | 31        | 16        | 4        | 1        | 1        | 1         |           | 15                         |           | 3         | 2         | 9         | 19,2     |  |
| 622140             | 14                         | 42       | 1,6      | 29        | 38        | 4        | 1        | 1        | 1         |           | 16                         |           | 4         | 2         | 8         | 22,1     |  |
| 120630             | 7                          | 32       | 1,1      | 34        | 16        | 2        | 1        | 1        | 1         |           | 15                         |           | 3         | 1         | 8         | 12,9     |  |
| 512163-8           | 11                         | 39       | 1,6      | 32        | 27        | 6        | 2        | 2        | 1         |           | 15                         |           | 3         | 2         | 8         | 19,1     |  |
| 120639             | 9                          | 37       | 1,1      | 30        | 31        | 4        | 1        | 1        | 1         |           | 16                         |           | 3         | 2         | 8         | 16,2     |  |
| 512163-8           | 11                         | 39       | 1,6      | 32        | 27        | 6        | 2        | 2        | 1         |           | 15                         |           | 3         | 2         | 8         | 19,1     |  |
| 822098             | 14                         | 41       | 1,8      | 29        | 39        | 4        | 1        | 1        | 1         |           | 15                         |           | 3         | 4         | 8         | 21,9     |  |
| 120630             | 7                          | 32       | 1,1      | 34        | 16        | 2        | 1        | 1        | 1         |           | 15                         |           | 3         | 1         | 8         | 12,9     |  |
| 622140             | 14                         | 42       | 1,6      | 29        | 38        | 4        | 1        | 1        | 1         |           | 16                         |           | 4         | 2         | 8         | 22,1     |  |
| 1012155-1          | 12                         | 37       | 1,4      | 31        | 16        | 4        | 1        | 1        | 1         |           | 15                         |           | 3         | 2         | 9         | 19,2     |  |

| Номер партії<br><br>Lot № | Номер плавки<br><br>Heat № | Механічні властивості<br>Mechanical properties acc. |                                                 |                                   |                            |                                                              | Технологічні властивості<br>Tehnical properties             |                                                 |                                              |                                                                                             |                                                       |                                                                 |
|---------------------------|----------------------------|-----------------------------------------------------|-------------------------------------------------|-----------------------------------|----------------------------|--------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------|----------------------------------------------|---------------------------------------------------------------------------------------------|-------------------------------------------------------|-----------------------------------------------------------------|
|                           |                            | EN ISO 6892-1                                       |                                                 |                                   | EN ISO 148-1               |                                                              | Сплюс-<br>цування<br>Flatte-<br>ning test<br>EN ISO<br>8492 | Розда-<br>вання<br>Drift test<br>EN ISO<br>8493 | Згин<br>Bend-<br>over test<br>EN ISO<br>8491 | Неруйнів.<br>контроль<br>Nondest-<br>ructive<br>inspection<br>EN ISO<br>10893-2<br>E4H<br>% | Гідровип-<br>робуван-<br>ня<br>Hydro-<br>testing<br>% |                                                                 |
|                           |                            | Границя<br>плиннос-<br>ті,<br><br>Yield<br>strength | Границя<br>міцності,<br><br>Tensile<br>strength | Видов-<br>ження<br><br>Elongation |                            | Темпер.<br>випробу-<br>вань<br>Test<br>temperat<br><br>T. °C |                                                             |                                                 |                                              |                                                                                             |                                                       | Робота<br>удару<br>Activity of<br>impact<br><br>KV<br>300/<br>J |
|                           |                            |                                                     |                                                 | A<br>L=80<br>%                    | A<br>L=5,65<br><br>√ So, % |                                                              |                                                             |                                                 |                                              |                                                                                             |                                                       |                                                                 |
|                           |                            |                                                     |                                                 |                                   |                            |                                                              |                                                             |                                                 |                                              |                                                                                             |                                                       |                                                                 |
| 1                         | 1012155-1                  | 286                                                 | 394                                             |                                   | 39,5                       |                                                              |                                                             |                                                 |                                              | 100                                                                                         |                                                       |                                                                 |
| 2                         | 622140                     | 345                                                 | 437                                             |                                   | 34                         |                                                              |                                                             |                                                 |                                              | 100                                                                                         |                                                       |                                                                 |
| 3                         | 120630                     | 300                                                 | 364                                             |                                   | 43                         |                                                              |                                                             |                                                 |                                              | 100                                                                                         |                                                       |                                                                 |
| 4                         | 512163-8                   | 327                                                 | 376                                             |                                   | 39                         |                                                              |                                                             |                                                 |                                              | 100                                                                                         |                                                       |                                                                 |
| 5                         | 120639                     | 323                                                 | 402                                             |                                   | 37,5                       |                                                              |                                                             |                                                 |                                              | 100                                                                                         |                                                       |                                                                 |
| 6                         | 512163-8                   | 313                                                 | 411                                             |                                   | 39,5                       |                                                              |                                                             |                                                 |                                              | 100                                                                                         |                                                       |                                                                 |
| 7                         | 822098                     | 364                                                 | 453                                             |                                   | 35                         |                                                              |                                                             |                                                 |                                              | 100                                                                                         |                                                       |                                                                 |
| 8                         | 120630                     | 325                                                 | 360                                             |                                   | 38,5                       |                                                              |                                                             |                                                 |                                              | 100                                                                                         |                                                       |                                                                 |
| 9                         | 622140                     | 311                                                 | 404                                             |                                   | 40                         |                                                              |                                                             |                                                 |                                              | 100                                                                                         |                                                       |                                                                 |
| 10                        | 1012155-1                  | 358                                                 | 456                                             |                                   | 39                         |                                                              |                                                             |                                                 |                                              | 100                                                                                         |                                                       |                                                                 |

Примітка:

Note:

- Візуальний контроль, маркування та пакування без зауважень.  
Visual inspection marking and packing - without remarks.
- Розміри труб в межах допусків.  
Pipe dimensions are permitted: DIN EN 10219 -2:2019
- Маркування на бирці / Marking on bundle tag
- Декларація характеристик якості № S235JRH-CPR-01  
див. на сайті [www.dmzkominmet.com.ua](http://www.dmzkominmet.com.ua)  
Declaration of quality properties Nr. S235JRH-CPR-01  
see in the Site [www.dmzkominmet.com.ua](http://www.dmzkominmet.com.ua)

Зазначені в цьому документі труби відповідають за якістю умовам контракту.  
Those in this paper tube is equal to the quality terms of the contract.



07  
0090  
S235JRH-CPR-01

Підпис експерта  
Signature expert  
Штамп експерта  
Stamp expert









**BUILDING RESEARCH INSTITUTE (N I S I) Ltd.**

**NOTIFIED TEST LABORATORY**

**Identification number NB 2032 of the Register of EC**

Licence granted by the Ministry of Development and Public Works (MRRB), No CPD 10-2032

1618 Sofia, BULGARIA, 86 Nikola Petkov Blvd, tel.+359 2 856 10 82, fax +359 2 955 96 38, e-mail: nisi\_sofia@abv.bg

## **TEST REPORT**

**INITIAL TYPE TESTING**

**ITT-15.27 / 25.01.2016**

The tests are carried out in compliance with the Chapter Two of the Bulgarian *Regulation for the Essential Requirements to Constructions and Conformity Assessment of Construction Products (RERCCACP)* that bring into force the *Construction Products Directive (CPD) 89/106/EEC* of the Council of European Communities.

**Product:** Facade System 50 mm (CW 50) of aluminium profiles system  
"VIVA ALUMINIUM SYSTEMS"

**Producer:** Factory of VIAS Ltd,  
Bulgaria, Shumen, 68A "Rishki prohod" Blvd.

**Applicant:** VIAS Ltd,  
Bulgaria, Shumen, 68A "Rishki prohod" Blvd.

**Document for assignment:** Contract No 40/2015

**Test samples:** Fragment of facade system 50 mm (CW 50) with dimensions  
2000/2000 mm.  
Details of the window are supplied in Annex 1.

**Test period:** From 07.12.2015 to 22.01.2016

**Assessment of the performance:** The submitted Facade System 50 mm (CW 50) of aluminium profiles system „VIVA ALUMINIUM SYSTEMS meets watertightness class R6; air permeability class A2; impact resistance class I3, E3; resistance to wind load 800 Pa with deformities 0,18/0,58 mm; weighted sound reduction index  $R_w (C; C_{tr}) = 28 (-1; -3) \text{ dB}$ ; thermal transmittance  $U_w = 1,34 \text{ W}/(\text{m}^2 \cdot \text{K})$ .

**Head of Test Laboratory**  
Res. Ass. Eng. Tsvetana Gyurova

**General Manager of NISI**  
Prof. Dr. Eng. Rumel Gulev



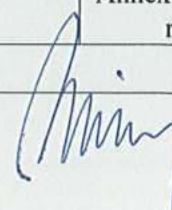
*The Test Report consists of 15 pages.*

*Copies of separate parts of the Test Report can be made with written consent of the NISI Ltd.*



### Testing data:

| No                                                                                                                                                                         | Characteristic                                                                                                                      | Unit of measurement   | Test method    | Test result                                              | Requirement according                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------|----------------------------------------------------------|----------------------------------------------------------------------------|
| 1.                                                                                                                                                                         | Watertightness in static test pressure P = 600 Pa *                                                                                 | class                 | EN 12155       | R6                                                       | EN 12154<br>The requirements are given in Annex 2 of the test report.      |
| * Detailed test results are given in Annex 2 of the test report.                                                                                                           |                                                                                                                                     |                       |                |                                                          |                                                                            |
| 2.                                                                                                                                                                         | Resistance to wind load *                                                                                                           | mm<br>mm              | EN 12179       | +0,18 / -0,18<br>+0,58 / -0,55                           | EN 13116:<br><br>P = ± 800 Pa and<br>f < 1/200 L<br><br>< ±4,68<br>< ±9,50 |
| 2.1                                                                                                                                                                        | Deformations (f) the main load profiles of wind pressure P = ± 800 Pa:<br>- horizontal axis (point 2);<br>- vertical axis (point 5) |                       |                |                                                          |                                                                            |
| 2.2                                                                                                                                                                        | Safety test at triple pressure                                                                                                      |                       |                |                                                          | -                                                                          |
| * Detailed test results are given in Annex 3 of the test report.                                                                                                           |                                                                                                                                     |                       |                |                                                          |                                                                            |
| 3.                                                                                                                                                                         | Impact resistance **                                                                                                                | class                 | EN 12600       | I3; E3                                                   | EN 14019<br>No residual deformities and defects in the glass.              |
| * Detailed test results are given in Annex 3 of the test report.<br>** Detailed test results are given in Annex 4 of the test report.                                      |                                                                                                                                     |                       |                |                                                          |                                                                            |
| 4.                                                                                                                                                                         | Airborne sound insulation – weighted sound reduction index, R <sub>w</sub> (C; C <sub>tr</sub> ) *                                  | dB                    | EN ISO 10140-2 | 28 (-1; -3)**                                            | -                                                                          |
| * Weighted sound reduction index, R <sub>w</sub> (C; C <sub>tr</sub> ) dB, according to EN ISO 717-1.<br>** Detailed test results are given in Annex 5 of the test report. |                                                                                                                                     |                       |                |                                                          |                                                                            |
| 5.                                                                                                                                                                         | Thermal transmittance coefficient:<br>- the horizontal profile<br>- the vertical profile<br>- the glass<br>- the fragment facade    | W/(m <sup>2</sup> .K) | EN ISO 12631   | 1,85 ±0,004<br>1,99 ±0,004<br>1,24 ±0,011<br>1,34 ±0,010 | -<br>-<br>-<br>-                                                           |
| 6.                                                                                                                                                                         | Air permeability *                                                                                                                  | class                 | EN 12153       | A2                                                       | EN 12152<br>The requirements are given at Annex 6 of the test report.      |
| * Detailed test results are given in Annex 6 of the test report.                                                                                                           |                                                                                                                                     |                       |                |                                                          |                                                                            |



**Technical documentation:**

|                         |                                                                                                                                              |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| БДС EN 13830:2015       | Curtain walling - Product standard                                                                                                           |
| БДС EN 12179:2003       | Curtain walling - Resistance to wind load - Test method                                                                                      |
| БДС EN 13116:2003       | Curtain walling - Resistance to wind load - Performance requirements                                                                         |
| БДС EN 12155:2003       | Curtain walling - Watertightness - Laboratory test under static pressure                                                                     |
| БДС EN 12154:2003       | Curtain walling - Watertightness - Performance requirements and classification                                                               |
| БДС EN 12153:2003       | Curtain walling - Air permeability - Test method                                                                                             |
| БДС EN 12152:2003       | Curtain walling - Air permeability - Performance requirements and classification                                                             |
| БДС EN ISO 10140-2:2003 | Acoustics. Laboratory measurements of sound insulation of building elements. Part 2: Measurement of airborne sound insulation                |
| БДС EN ISO 717-1:2013   | Acoustics. Rating of sound insulation in buildings and of building elements. Part 1: Airborne sound insulation;                              |
| БДС EN ISO 12567-1:2010 | Thermal performance of windows and doors - Determination of thermal transmittance by the hot-box method - Part 1: Complete windows and doors |
| БДС EN 12600:2003       | Glass in building - Pendulum test - Impact test method and classification for flat glass                                                     |

**Tests are carried out by**

1. Eng. O. Savov
2. Res. Ass. Eng. K. Glushkova

**Head of Test Laboratory**

Res. Ass. Eng. Tsvetana Gurova





Annex 1

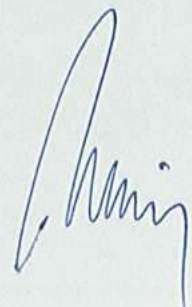
**Data of facade for testing**

**Name of product:** Facade System 50 mm (CW 50) of aluminum profiles system „VIVA ALUMINIUM SYSTEMS“

**Description of test specimen:** Facade System 50 mm (CW 50):

- Dimensions 1750/2550 mm;
- Glazing – glass with a total thickness of 20 mm (4 mm white glass, 12 mm air gap filled with Argon, 4 mm glass „сънерджи”);
- Used Al profiles:
  - mullion – 5015;
  - transom – 5005;
  - subcap – 5006;
  - cap – 5007;
  - clasp for contibever – 5012;
  - contibever – 5013;
  - pressure plate – 5011;
  - connecting profile – 5014;
- Gasket:
  - G06 – gasket for mullion;
  - G07 – gasket for transom and subcap.

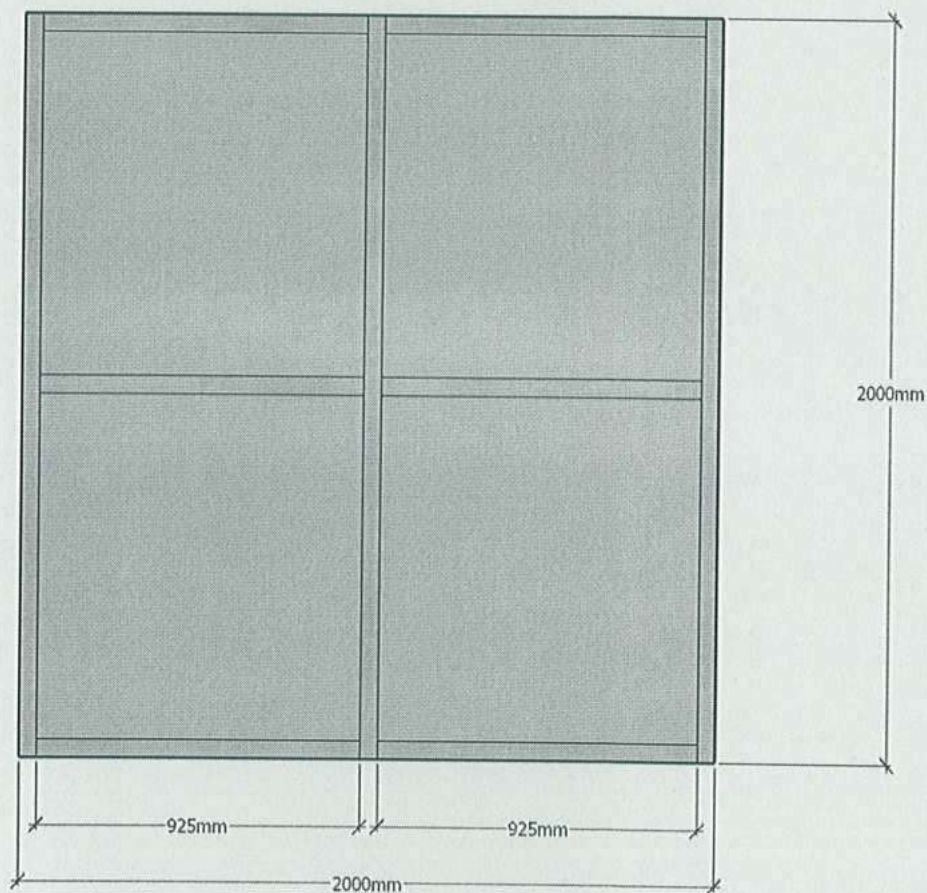
*Note: Detailed drawings of the test specimen are shown on p. 6 to p. 10.*







## FACADE SYSTEM CW 50

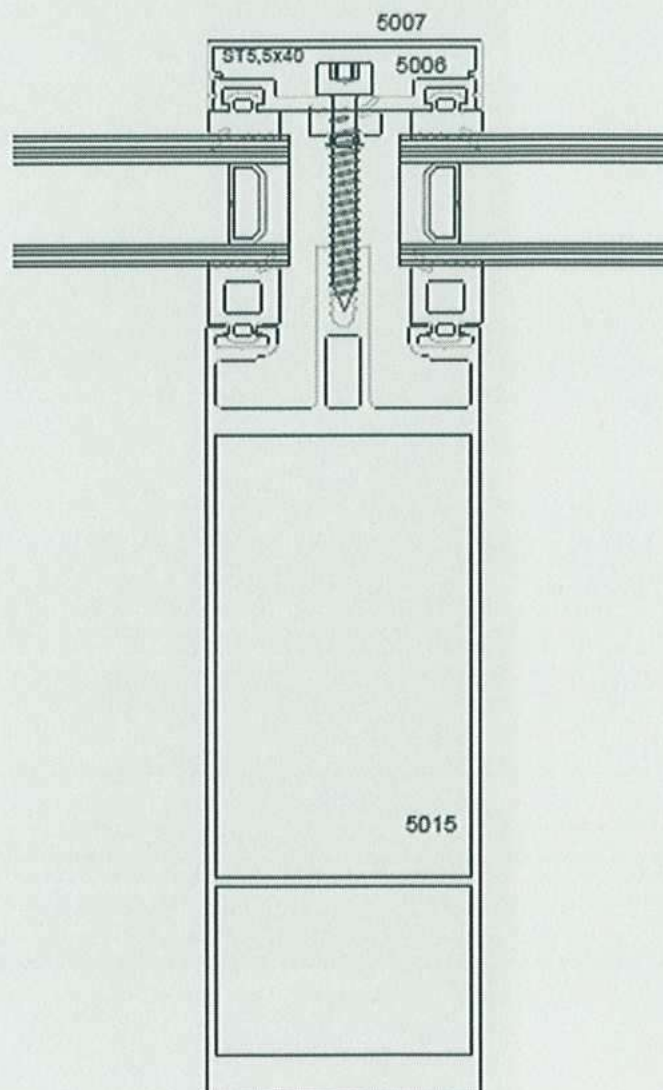


A handwritten signature in blue ink, located in the bottom right corner of the page. The signature is stylized and appears to read "Min".

**VIVA®**  
ALUMINIUM  
SYSTEMS



## Фасадна Система 5000

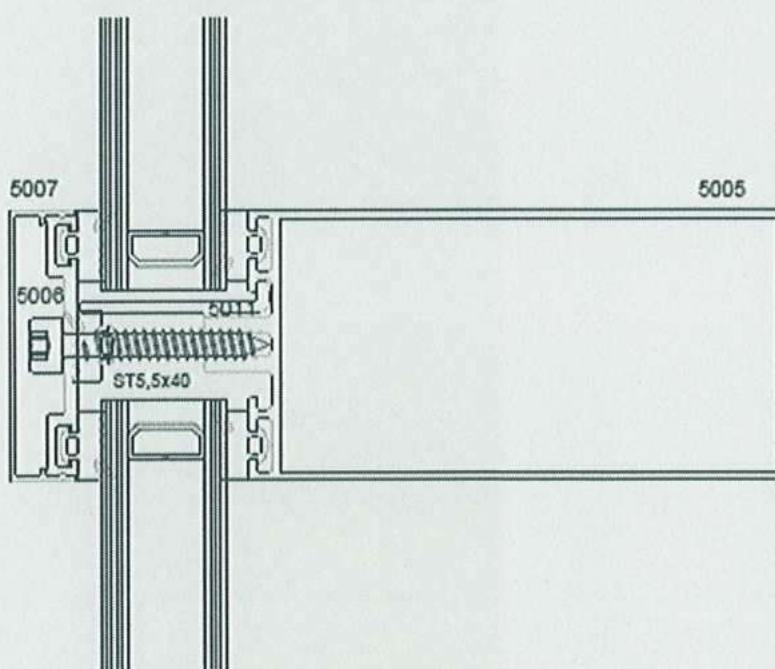


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**VIVA®**  
ALUMINIUM  
SYSTEMS



## Фасадна Система 5000

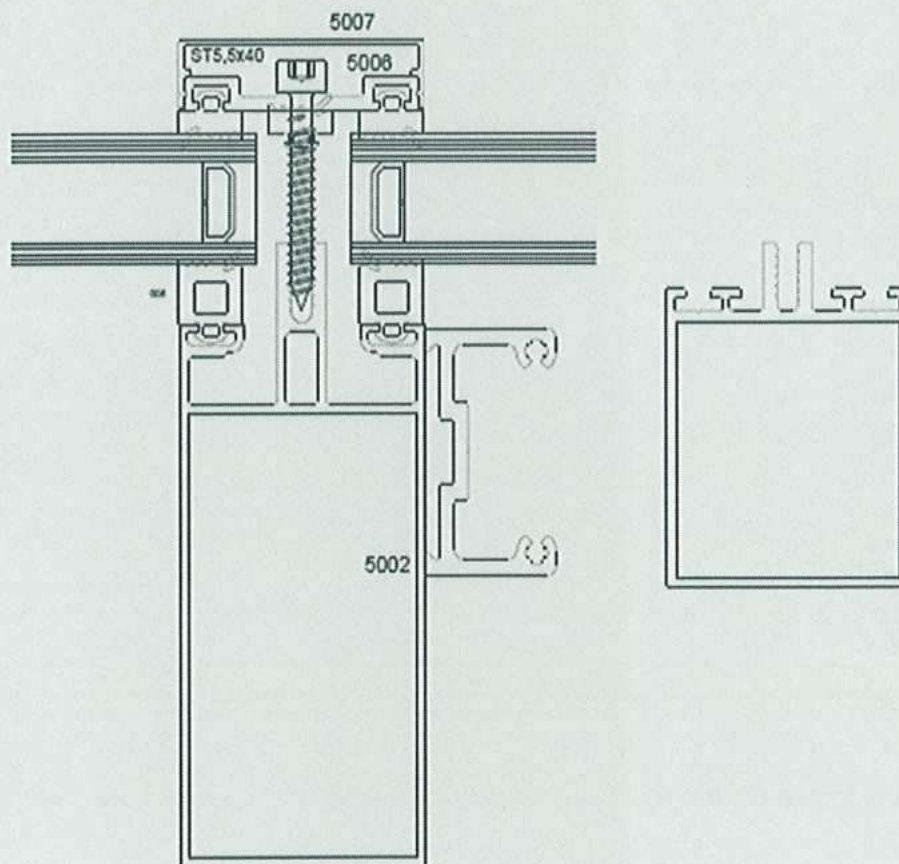


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## Фасадна Система 5000

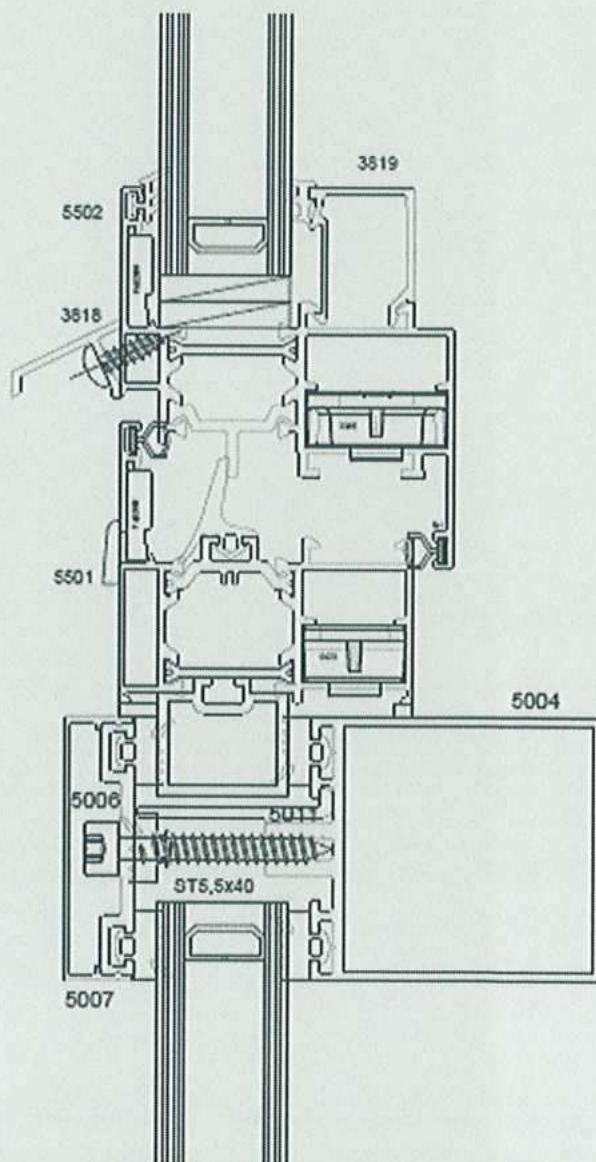


*Miny*

**VIVA®**  
ALUMINIUM  
SYSTEMS



## Фасадна Система 5000



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Annex 2

**Watertightness – EN 12155**

**1. Test conditions and test equipment data**

The test is carried out on a stand system "Rosenheim" type "VH AE" of HOLTEN located in the Laboratory "Building Physics" at NISI Ltd. The stand consists of a chamber and control and measurement desk. The chamber is airtight and only one of the sides is open. This side is closed by appropriate fixing of testing facade that is oriented to the outside of the chamber.

The testing window is fixed to the spacers (the chamber sides) by manual clamps. Microporous rubber seals are used between the facade frame and the chamber walls for good seal.

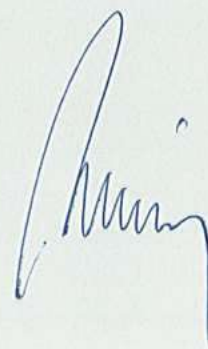
Water quantity – 2 dm<sup>3</sup> per 1 m<sup>2</sup>/min.

Air temperature in the chamber and the laboratory is 20 °C.

Relative humidity in the chamber and the laboratory is 50 %.

**2. Test results**

| Test pressure,<br>Pa | Continuance,<br>min | Results of the<br>monitoring on the<br>internal face of<br>the test specimen | Classification | Requirements<br>according to EN 12154                      |
|----------------------|---------------------|------------------------------------------------------------------------------|----------------|------------------------------------------------------------|
| 0                    | 15                  | Water resistant                                                              | -              | Do not leaking, Pa/min<br>0/15; 50/5                       |
| 50                   | 5                   | Water resistant                                                              | -              | 0/15; 50/5; 100/5                                          |
| 100                  | 5                   | Water resistant                                                              | -              | 0/15; 50/5; 100/5; 150/5                                   |
| 150                  | 5                   | Water resistant                                                              | <b>R4</b>      | 0/15; 50/5; 100/5; 150/5;                                  |
| 300                  | 5                   | Water resistant                                                              | <b>R5</b>      | 200/5; 300/5                                               |
| 450                  | 5                   | Do not leaking                                                               | <b>R6</b>      | 0/15; 50/5; 100/5; 150/5;<br>200/5; 300/5; 450/5           |
| 600                  | 5                   | Leaking from the<br>inner corners of<br>the wings below<br>(left and right)  | <b>R7</b>      | 0/15; 50/5; 100/5; 150/5;<br>200/5; 300/5; 450/5;<br>600/5 |





## Resistance to wind load – БДC EN 12179

### 1. Test conditions and equipment data

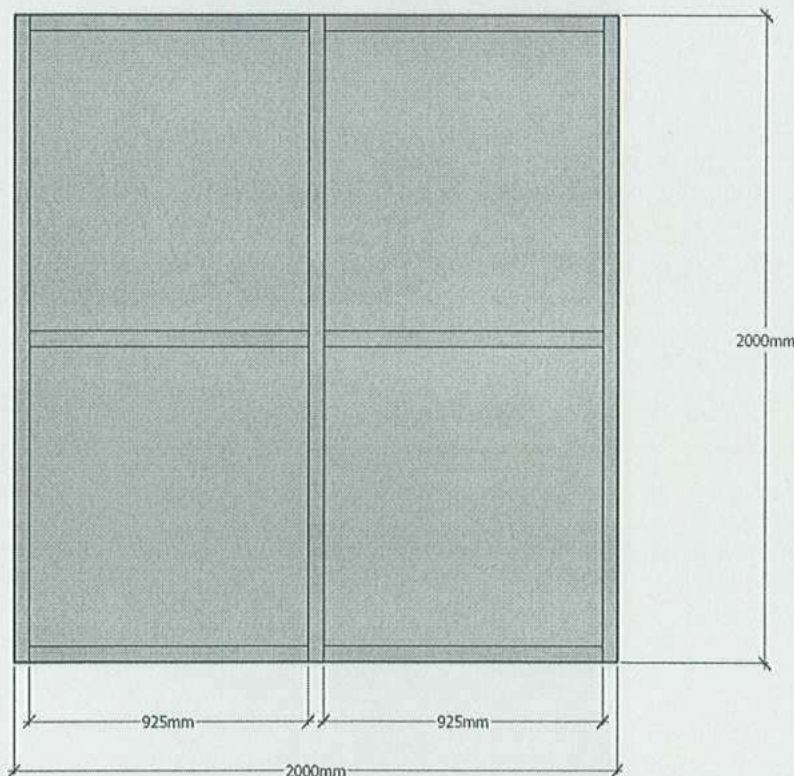
The test equipment and the chamber are in accordance with Annex 2 of the test report.

Air temperature in the chamber and the laboratory is 15 °C.

Relative humidity in the chamber and the laboratory is 64 %.

### 2. Testing of deformation (deflections)

Measurement of deformations (deflections) of the linear elements in height of the facade wings is made using measuring devices type TGL 7682 accurate to 0,01 mm (produced of SUHL, Germany).



Disposition scheme of measuring points on the facade

| Test pressure,<br>Pa | Deflection in mm               |                                |                                |
|----------------------|--------------------------------|--------------------------------|--------------------------------|
|                      | f (f <sub>p res</sub> ) B T.1  | f (f <sub>p res</sub> ) B T.2  | f (f <sub>p res</sub> ) B T.3  |
| +800 / -800          | +0,65 / -0,43<br>(+0,03/-0,03) | +0,52 / -0,53<br>(+0,06/-0,01) | +0,04 / -0,28<br>(0,00/-0,10)  |
|                      | f (f <sub>p res</sub> ) B T.4  | f (f <sub>p res</sub> ) B T.5  | f (f <sub>p res</sub> ) B T.6  |
| +800 / -800          | +0,22 / -0,24<br>(+0,01/-0,03) | +0,75 / -0,76<br>(+0,06/ 0,00) | +0,11 / -0,18<br>( 0,16/-0,02) |

\* f<sub>p res</sub> is residual deflection.

### 3. Repeated pressure test

The test is implemented at a pressure of  $\pm 400$  Pa, repeated 50 times.

At the repeated 50 cycles test including negative and positive pressure of 400 Pa, that simulate the facade behavior at the wind blows (pressure and suction) defects and damages that deteriorate the facade performance are not detected.

### 4. Safety test at triple pressure

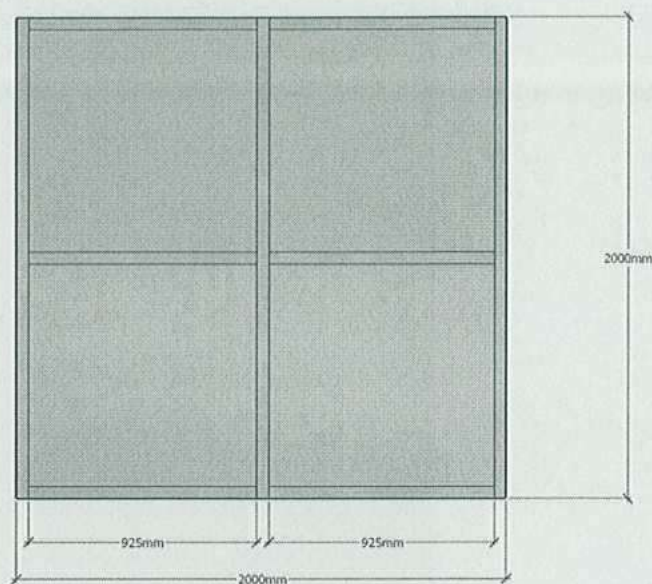
The test is carried out at positive and negative pressure  $\pm 1200$  Pa only once.

Damages that deteriorate the facade performance are not detected during the safety test at triple pressure.



Annex 4

**Impact resistance – EN 12600**



| Height release, mm | Test items         |            |                     |            |
|--------------------|--------------------|------------|---------------------|------------|
|                    | 1                  | 2          | 3                   | 4          |
| 200                | withstands         | withstands | withstands          | withstands |
| 300                | withstands         | withstands | withstands          | withstands |
| 450                | withstands         | withstands | withstands          | withstands |
| 700                | Breaking the glass | -          | -3,7 mm deformation | -          |

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## Airborne sound insulation – EN ISO 10140-2, EN ISO 717-1

### 1. Test conditions, test facilities and equipment data

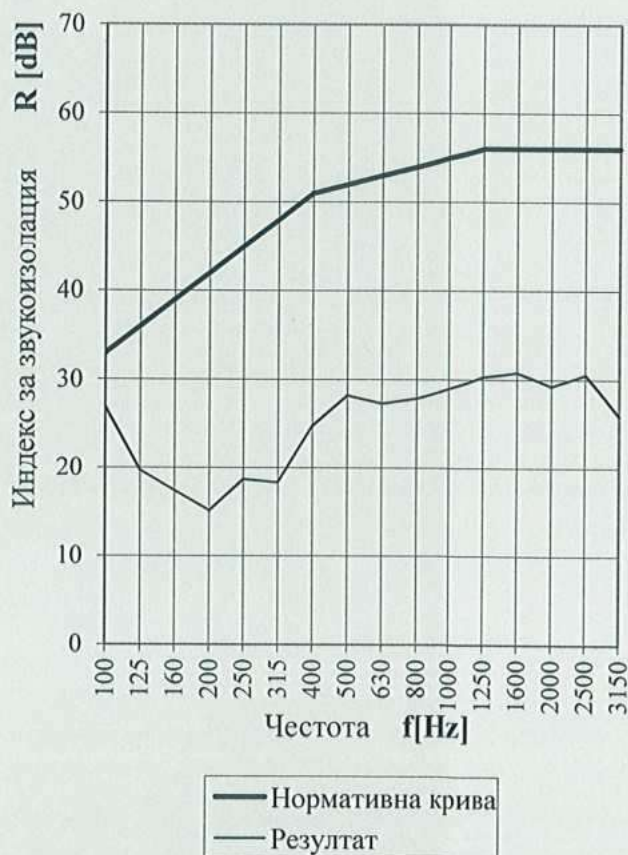
The test is carried out at “Building physics” laboratory:

- Air temperature 10 °C; relative humidity 60 %
- Source room  $V = 170 \text{ m}^3$ ;
- Receiving room  $V = 119 \text{ m}^3$ ;
- Filling wall with  $R_w = 50 \text{ dB}$ ;
- Acoustic equipment “Brüel & Kjær” - Denmark:
  - Analyzer for building acoustics Type 4418;
  - Microphone Type 4166;
  - Preamplifier Type 2916;
  - Source noise Type 4292;
  - Sound calibration Type 4230.

The test specimen is installed by the specialists of Applicant.

### 2. Test results

| f, Hz | 100  | 125  | 160  | 200  | 250  | 315  | 400  | 500  | 630  | 800  | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| R, dB | 26,9 | 19,7 | 17,4 | 15,1 | 18,7 | 18,4 | 24,8 | 28,2 | 27,3 | 27,9 | 29,0 | 30,3 | 30,8 | 29,3 | 30,6 | 25,9 |



ОЦЕНЕН ИНДЕКС НА ИЗОЛАЦИЯ ОТ ВЪЗДУШЕН ШУМ

$R_w (C; C_{tr}) = 28 (-1; -3) \text{ dB}$

Annex 6

## Air permeability – EN 12153

### 1. Test conditions and test equipment data

The test equipment is in accordance with Annex 2 of the test report.

Air temperature in the receiving room is 20 °C.

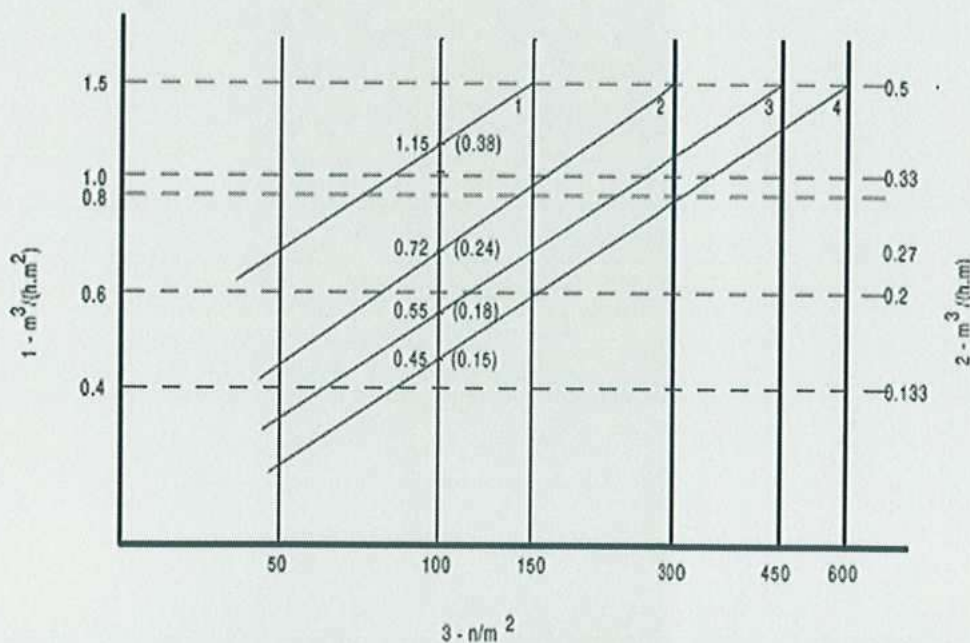
Relative humidity in the receiving room is 50 %.

### 2. Test results

| P, Pa                                            | 50   | 100  | 150  | 300  | 450  | 600   |
|--------------------------------------------------|------|------|------|------|------|-------|
| V, m <sup>3</sup> /h                             | 1,80 | 2,50 | 3,00 | 4,90 | 6,70 | 10,90 |
| V <sub>l</sub> , m <sup>3</sup> /hm              | 0,18 | 0,25 | 0,31 | 0,50 | 0,67 | 1,10  |
| V <sub>w</sub> , m <sup>3</sup> /hm <sup>2</sup> | 0,40 | 0,56 | 0,70 | 1,26 | 1,59 | 2,60  |

Air permeability – classification:

- overall area – class A2;
- length of opening joints – class A2.



Classification - maximum air permeability

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ПРИВАТНЕ АКЦІОНЕРНЕ  
ТОВАРИСТВО "ДНІПРОВСЬКИЙ  
МЕТАЛУРГІЙНИЙ ЗАВОД"  
49064, Дніпропетровська обл., місто  
Дніпро, вулиця Маяковського, будинок  
3

СЕРТИФИКАТ КАЧЕСТВА № ДМ300001711  
CERTIFICATE OF QUALITY  
сертификат приемки "3.1" EN 10204  
inspection certificate

Дата 30.06.2023  
Date

QUALITY MANAGEMENT  
SYSTEM CERTIFICATED  
ISO 9001:2015 №12  
100 60492 TMS

Грузополучатель: Метинвест-СМЦ ООО  
Consignee: Metinvest-SMC ООО  
Наименование продукции: Швеллеры стальные горячекатаные;  
Description of goods: Hot Rolled Steel Channels;

ст. Вишневе  
st. Vishneve

Заказ № ДМ300021232 от 06.06.2023  
Production Order  
Заказ ДМЗ ДМ300021232

Seller (Exporter): PJSC "DMP" (PRIVATE JOINT\_STOCK  
COMPANY "DNEPROVSK METALLURGICAL PLANT")

49064, DNIPROPETROVSK REGION, DNIPRO CITY,  
MAIAKOVSKOHO STREET, HOUSE 3

Стандарты: ТУ У 24.1-05393056-003:2020; ДСТУ 2651:2005; ДСТУ4484:2005  
Standards: TU U 24.1-05393056-003:2020; DSTU 2651:2005; DSTU4484:2005

Контракт-спецификация/SO  
Contract-Specification/SO

Лот №  
Lot No

Вагон/Авто № 62373352  
Railcar/Car No

Tel/Fax: +38(056) 794-89-16, 794-87-47

| №<br>No                                                                          | Номер пачки<br>No of bundle | Наименование профиля<br>(сечение)<br>Name of profile (cross-section) | Точность<br>прокатки<br>Rolling<br>accuracy | Номер плавки<br>No of heat | Марка стали<br>Steel grade | Категор<br>ия<br>Category | Сорт<br>Grade    | Гарантия<br>сроком<br>Сatisfaction<br>of welding | * Вид<br>длины<br>Type of<br>length | Длина, мм<br>Length, mm | Количество,<br>штук(крат)<br>Quantity piece<br>(periodicity) | Вес нетто, т<br>Net weight, t                  | Итого по профилю<br>и виду длины, т<br>Sum of profile and type<br>of length, t |
|----------------------------------------------------------------------------------|-----------------------------|----------------------------------------------------------------------|---------------------------------------------|----------------------------|----------------------------|---------------------------|------------------|--------------------------------------------------|-------------------------------------|-------------------------|--------------------------------------------------------------|------------------------------------------------|--------------------------------------------------------------------------------|
| 1                                                                                | 3300623115                  | Швеллер 20П                                                          | В                                           | 321467                     | СТЗПС                      | 5                         | 1                | св                                               | мд/мл                               | 12 000                  | 32                                                           | 7,220                                          |                                                                                |
| 2                                                                                | 3300623117                  | Швеллер 20П                                                          | В                                           | 321467                     | СТЗПС                      | 5                         | 1                | св                                               | мд/мл                               | 12 000                  | 32                                                           | 7,190                                          |                                                                                |
| 3                                                                                | 3300623119                  | Швеллер 20П                                                          | В                                           | 321467                     | СТЗПС                      | 5                         | 1                | св                                               | мд/мл                               | 12 000                  | 32                                                           | 7,060                                          |                                                                                |
| 4                                                                                | 3300623121                  | Швеллер 20П                                                          | В                                           | 321468                     | СТЗПС                      | 5                         | 1                | св                                               | мд/мл                               | 12 000                  | 32                                                           | 6,990                                          |                                                                                |
| 5                                                                                | 330062355                   | Швеллер 20П                                                          | В                                           | 311572                     | СТЗПС                      | 5                         | 1                | -                                                | мд/мл                               | 12 000                  | 32                                                           | 7,160                                          | 35,620                                                                         |
| * мд/мл - мерная длина/measured length; нд/ул - немерная длина/unmeasured length |                             |                                                                      |                                             |                            |                            |                           |                  |                                                  |                                     |                         |                                                              |                                                |                                                                                |
| По профилю<br>In profile                                                         |                             | Швеллер 20П<br>Channels 20П                                          | марки<br>steel grade                        | СТЗПС<br>СТЗПС             | отгружено<br>shipped       | 5<br>5                    | пач.<br>packages | 160 шт<br>160 pieces                             | весом<br>weighting                  | 35,620 т<br>35,620 t    |                                                              |                                                |                                                                                |
|                                                                                  |                             |                                                                      |                                             |                            |                            |                           |                  |                                                  |                                     |                         |                                                              | Вес нетто, т<br>Net weight, t                  | 35,620                                                                         |
|                                                                                  |                             |                                                                      |                                             |                            |                            |                           |                  |                                                  |                                     |                         |                                                              | Кроме того вес упаковки, т<br>Moreover tare, t | 0,120                                                                          |



| Показатели качества товара<br>Quality characteristics of goods      |                            |                                              |                                                                                                           |                                                                                                                               |                                                 |          |          |          |          |          |          |          |           |           |                                                |          |          |                                               |                                                              |                                                |                                   |                                                              |       |       |       |                                                 |                            |     |                                  |                                    |                                          |
|---------------------------------------------------------------------|----------------------------|----------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|------------------------------------------------|----------|----------|-----------------------------------------------|--------------------------------------------------------------|------------------------------------------------|-----------------------------------|--------------------------------------------------------------|-------|-------|-------|-------------------------------------------------|----------------------------|-----|----------------------------------|------------------------------------|------------------------------------------|
| Номер плавки<br>No of heat                                          | Марка стали<br>Steel grade | Признак сборной плавки<br>Combined heat mark | Углеродный эквивалент<br>Carbonic equivalent                                                              | Индекс пробы: * - ковшовая,<br>s - с готового проката<br>Sample index: * - scoop sample,<br>s - from finished rolled products | Химический состав, %<br>Chemical composition, % |          |          |          |          |          |          |          |           |           | Механические свойства<br>Mechanical properties |          |          |                                               |                                                              |                                                |                                   |                                                              |       |       |       |                                                 |                            |     |                                  |                                    |                                          |
|                                                                     |                            |                                              |                                                                                                           |                                                                                                                               | C x 100                                         | Mn x 100 | Si x 100 | S x 1000 | P x 1000 | Cr X 100 | Ni x 100 | Cu x 100 | Al x 1000 | Ti x 1000 | Mo x 1000                                      | V x 1000 | N x 1000 | Предел текучести, Н/мм2<br>Yield point, N/mm2 | Временное<br>сопротивление, Н/мм2<br>Tensile strength, N/mm2 | Относительное<br>удлинение, %<br>Elongation, % | Изгиб, Bending<br>Излом, Fracture | Ударная вязкость, Дж/см2, КСЧ<br>Impact strength, J/cm2, KCU |       |       |       | После механического<br>старения<br>After ageing | Твер-<br>дость<br>Hardness |     | Макроструктура<br>Macrostructure | Работа удара, Дж<br>Impact work, J | Относительное сужение, %<br>Reduction, % |
|                                                                     |                            |                                              |                                                                                                           |                                                                                                                               |                                                 |          |          |          |          |          |          |          |           |           |                                                |          |          |                                               |                                                              |                                                |                                   | При температуре, t<br>Temperature, t                         |       |       |       |                                                 | HB                         | HRC |                                  |                                    |                                          |
|                                                                     |                            |                                              |                                                                                                           |                                                                                                                               |                                                 |          |          |          |          |          |          |          |           |           |                                                |          |          |                                               |                                                              |                                                |                                   | +20°C                                                        | -20°C | -40°C | -60°C |                                                 |                            |     |                                  |                                    |                                          |
|                                                                     |                            |                                              |                                                                                                           |                                                                                                                               |                                                 |          |          |          |          |          |          |          |           |           |                                                |          |          |                                               |                                                              |                                                |                                   |                                                              |       |       |       |                                                 |                            |     |                                  |                                    |                                          |
| 311572                                                              | СТЗПС                      |                                              | 0,23                                                                                                      | *                                                                                                                             | 15                                              | 45       | 13       | 8        | 9        | 4        | 3        | 4        | 23        | -         | 5                                              | 1        | 7        | -                                             | -                                                            | -                                              | -                                 | -                                                            | -     | -     | -     | -                                               | -                          | -   | -                                | -                                  | -                                        |
| 321467                                                              | СТЗПС                      |                                              | 0,24                                                                                                      | *                                                                                                                             | 16                                              | 46       | 15       | 7        | 9        | 4        | 3        | 5        | 21        | -         | 5                                              | 1        | 7        | -                                             | -                                                            | -                                              | -                                 | -                                                            | -     | -     | -     | -                                               | -                          | -   | -                                | -                                  | -                                        |
| 321468                                                              | СТЗПС                      |                                              | 0,22                                                                                                      | *                                                                                                                             | 14                                              | 45       | 13       | 7        | 12       | 5        | 3        | 5        | 24        | -         | 5                                              | 1        | 8        | -                                             | -                                                            | -                                              | -                                 | -                                                            | -     | -     | -     | -                                               | -                          | -   | -                                | -                                  | -                                        |
| Примечание<br>Note                                                  |                            |                                              | Содержание азота, мышьяка в пределах ДСТУ 2651:2005<br>Content of nitrogen, arsenic within DSTU 2651:2005 |                                                                                                                               |                                                 |          |          |          |          |          |          |          |           |           |                                                |          |          |                                               |                                                              |                                                |                                   |                                                              |       |       |       |                                                 |                            |     |                                  |                                    |                                          |
| Комментарий<br>Comment                                              |                            |                                              |                                                                                                           |                                                                                                                               |                                                 |          |          |          |          |          |          |          |           |           |                                                |          |          |                                               |                                                              |                                                |                                   |                                                              |       |       |       |                                                 |                            |     |                                  |                                    |                                          |
| Маркировка<br>Marking                                               |                            |                                              |                                                                                                           |                                                                                                                               |                                                 |          |          |          |          |          |          |          |           |           |                                                |          |          |                                               |                                                              |                                                |                                   |                                                              |       |       |       |                                                 |                            |     |                                  |                                    |                                          |
| М.: подтверждено, что продукция соответствует требованиям стандарта |                            |                                              |                                                                                                           |                                                                                                                               |                                                 |          |          |          |          |          |          |          |           |           |                                                |          |          |                                               |                                                              |                                                |                                   |                                                              |       |       |       |                                                 |                            |     |                                  |                                    |                                          |

Мы подтверждаем, что продукция полностью соответствует по качеству применяемым стандартам, контрактам, договорам и другим требованиям нормативной документации.  
We certify that the quality of the produce fully conforms with the applied standards, contracts and other requirements of Standard technical documentation.  
Содержание радионуклидов до 370 Бк/кг (1-й класс применения по радиационному фактору) на основании результатов контроля радиоактивности выплавленного металла лабораторией физических факторов, что соответствует требованиям НРБУ-97 (аттестат аккредитации лаб.ГУ ОЦКПЗ МОЗ Украины №20514 от 06.08.2021г)  
Radionuclides content max. 370 Bq/kg (1st class of use by radiation factor) basing on results of radiation control of produced steel by Laboratory of Physical factors, which corresponds to the requirements of NRBU-97 (accreditation certificate of lab. MHP of Ukraine N20514 dated 06.08.2021)

Начальник ОТК  
Chief of quality (control) department

Контролер ОТК  
Inspector of quality (control) department

Захарчук Марина Евгеньевна  
Zaharchuk Marina Evgenevna

Сертификат качества № ДМ300001711

# CERTIFICAT

## DE CONSTANȚĂ A PERFORMANȚEI PRODUSULUI Numărul: CPP-180-2021

În conformitate cu Hotărârea de Guvern Nr. 913 din 25.07.2016 privind aprobarea Reglementării tehnice cu privire la cerințele minime pentru comercializarea produselor pentru construcții, acest certificat se aplică pentru:

**Produse termoizolante pentru clădiri. Produse fabricate din vată minerală,  
conform ANEXEI- una filă**

**Produse de: ООО «Завод теплоизоляционных материалов «ТЕХНО»,  
str. Rizdviana, 300, or. Cercasi, Ucraina**

**Loc de producție: str. Rizdviana, 300, or. Cercasi, Ucraina**

Acest certificat atestă îndeplinirea prevederilor privind asigurarea evaluării și verificarea constanței performanței descrise în anexa ZA a standardului armonizat

**SM EN 13162+A1:2016**

Organismul de certificare a efectuat controlul producției în fabrică, a confirmat verificarea continuă a constanței performanței la producător și confirmă că sunt respectate cerințele esențiale a standardului pentru produs în conformitate cu **sistemul 1**.

Acest certificat a fost emis prima dată la data de 21.06.2021 și va rămâne valabil până la data de 20.06.2024, atât timp cât standardul armonizat, produsul pentru construcții, metodele de evaluare a constanței performanței și condițiile de producție în fabrică nu sunt modificate esențial.

Evaluarea de supraveghere se va realiza o dată pe an în perioada de valabilitate a certificatului de conformitate, rezultatul evaluării va fi confirmat prin raport de evaluare de supraveghere. Acest certificat poate fi suspendat sau retras dacă se constată că nu se mențin condițiile în baza cărora a fost emis.

**Director General**

**Ion PUHA**





ANEXA

la CERTIFICATUL DE CONSTANȚĂ A PERFORMANȚEI Nr. CPP-180-2021

| Nr. | Tip/Marca                                                 | Densitatea,<br>kg/m <sup>3</sup> |
|-----|-----------------------------------------------------------|----------------------------------|
| 1   | TECHNOLITE EXTRA/ "РОКЛАЙТ" ЛАЙТ                          | 30±5                             |
| 2   | TECHNOVENT STANDARD/ ТЕХНОВЕНТ ЭКСТРА/Izolație tehnică 80 | 80±8                             |
| 3   | TECHNOROOF N30/ Izolație tehnică 120                      | 115±15                           |
| 4   | TECHNOROOF N40И                                           | 125±15                           |
| 5   | TECHNOROOF V50/ ТЕХНОРУФ В ЭКСТРА                         | 170±15                           |
| 6   | TECHNOROOF V60/ ТЕХНОРУФ В ОПТИМА                         | 180±15                           |
| 7   | TECHNOSANDWICH WALL                                       | 105±20                           |
| 8   | TECHNOFACADE                                              | 145±14                           |
| 9   | TECHNOFACADE EFFECT                                       | 135±13                           |
| 10  | TECHNOROOF 45                                             | 140±14                           |
| 11  | TECHNOROOF V70/ ТЕХНОРУФ В ПРОФ                           | 190±15                           |
| 12  | TECHNOACOUSTIC                                            | 40±5                             |
| 13  | TECHNOLITE OPTIMA/ ТЕХНОВЕНТ Н/ Izolație tehnică 40       | 35±5                             |
| 14  | TECHNOBLOCK STANDARD/ ТЕХНОВЕНТ Н ПРОФ                    | 45±5                             |
| 15  | TECHNOBLOCK PROF                                          | 65±5                             |
| 16  | TECHNOBLOCK OPTIMA/ Izolație tehnică 60                   | 55±5                             |
| 17  | TECHNOVENT PROF/ ТЕХНОРУФ Н ЭКСТРА/ Izolație tehnică 100  | 100±10                           |
| 18  | TECHNOFLOOR STANDARD/ ТЕХНОРУФ Н ОПТИМА<br>ТЕХНОФАС ДЕКОР | 110±11                           |
| 19  | TECHNOROOF 50/ ТЕХНОРУФ ПРОФ/ Izolație tehnică 150        | 160±15                           |
| 20  | TECHNOFACADE EXTRA/ TECHNOFACADE EXTRA                    | 90±10                            |
| 21  | TECHNOFACADE COTTAGE/ TECHNOFACADE COTTAGE                | 105±10                           |
| 22  | TECHNOFACADE OPTIMA/ ТЕХНОРУФ Н ПРОФ<br>ТЕХНОФАС ОПТИМА   | 120±10                           |



Director General

Ion PUHA



# СЕРТИФИКАТ

## СООТВЕТСТВИЯ ЗАВОДСКОГО ПРОИЗВОДСТВЕННОГО КОНТРОЛЯ № CPF-097-2021

В соответствии с постановлением правительства № 913 от 25.07.2016 об утверждении  
Технического регламента о минимальных требованиях к поставкам строительной  
продукции.

**Гидроизоляционные материалы:**  
**Герметик бутил-каучуковый ТехноНИКОЛЬ №45**  
**Герметик ТехноНИКОЛЬ 2 К**

Произведённые: ООО «Завод Технофлекс», филиал Учалы  
ул. Кровельная, д.1, г. Учалы, Республика Башкортостан, Россия

Место производства: ул. Кровельная, д.1, г. Учалы, Республика Башкортостан, Россия

Настоящим сертификатом подтверждается, что обеспечены все требования при проведении  
контроля производства и подтверждения постоянства эксплуатационных свойств продукции на  
производстве согласно спецификации продукции и

**ETM 02/03-047:2021**

Орган по сертификации произвел контроль производства и подтверждения постоянства эксплуатационных  
свойств продукции и подтверждает, что все прописанные требования стандарта для контроля продукции на  
производстве соответствуют заданным требованиям.

Сертификат выдан впервые, с 28.12.2021 и действителен до 27.12.2026 при условии сохранения всех  
требований, установленных на момент проведения сертификационных работ и если не изменены требования  
к методам испытаний и /или контроль производства и обеспечения контроля качества продукции, на  
производстве, включенные в гармонизированном стандарте.

Инспекционный контроль производится один раз в год на протяжении действия сертификата соответствия и  
подтверждается протоколами инспекционного контроля. Орган сертификации обязуется приостановить,  
изъять или аннулировать настоящий сертификат в случае несоблюдения требований установленных при  
выдаче сертификата.



Генеральный Директор

Ион ПУХА





# CERTIFICAT

## DE CONFORMITATE A CONTROLULUI PRODUCȚIEI ÎN FABRICĂ

**Numărul: CPF-097-2021**

În conformitate cu Hotărârea de Guvern Nr. 913 din 25.07.2016 privind aprobarea Reglementării tehnice cu privire la cerințele minime pentru comercializarea produselor pentru construcții, acest certificat se aplică pentru:

**Materiale hidroizolante:**

**Etanșant butil-cauciuc ТехноНИКОЛЬ №45**

**Etanșant ТехноНИКОЛЬ 2 К**

Produse de: **ООО «Завод Технофлекс», filiala Ucialî**  
**str. Krovelinaia, b.1, or. Ucialî, Republica Bașkortostan, Rusia**

Loc de producție: **str. Krovelinaia, b.1, or. Ucialî, Republica Bașkortostan, Rusia**

Acest certificat atestă îndeplinirea prevederilor privind asigurarea evaluării controlului producției în fabrică și verificarea constanței performanței descrise în fișele de produs și

**ETM 02/03-047:2021**

Organismul de certificare a efectuat controlul producției în fabrică, a confirmat verificarea continuă a constanței performanței la producător și confirmă că sunt respectate cerințele esențiale a standardelor de produs

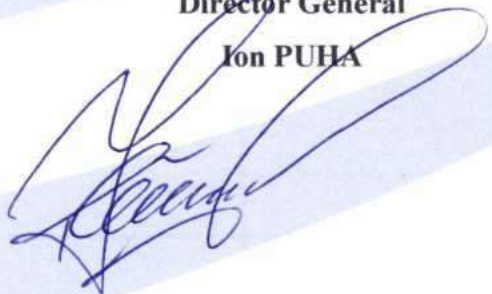
Acest certificat a fost emis prima dată la data de 28.12.2021 și va rămâne valabil până la data de 27.12.2026, atât timp cât produsul pentru construcții, metodele de evaluare a constanței performanței și condițiile de producție în fabrică nu sunt modificate esențial.

Evaluarea de supraveghere se va realiza o dată pe an în perioada de valabilitate a certificatului de conformitate, rezultatul evaluării va fi confirmat prin raport de evaluare de supraveghere. Acest certificat poate fi suspendat sau retras dacă se constată că nu se mențin condițiile în baza cărora a fost emis.



**Director General**

**Ion PUHA**





# CERTIFICAT

## PENTRU CONTROLUL PRODUCȚIEI ÎN FABRICĂ

Numărul: CPF-141-2021

În conformitate cu Hotărârea de Guvern Nr. 913 din 25.07.2016 privind aprobarea Reglementării tehnice cu privire la cerințele minime pentru comercializarea produselor pentru construcții, acest certificat se aplică pentru:

### Placă metalică autoportantă

**Utilizare:** pentru învelitoare de acoperiș,  
placări la exterior și căptușiri la interior.

Produs de:

**"DASTERUM" S.R.L.,**

**str. Lunca Bâcului, 29, mun. Chișinău, Republica Moldova**

**Loc de producție: str. Lunca Bâcului, 29, mun. Chișinău, Republica Moldova**

Produsele sunt supuse de către producător încercărilor inițiale de tip pentru produs și unui control al procesului de producție care cuprinde toate măsurile necesare pentru îndeplinirea și menținerea cerințelor specificate în documentele de referință. OC Certmatcon a efectuat inspecția inițială a procesului de producție, a evaluat rapoartele privind încercările de tip și va efectua supravegherea continuă a procesului de producție. Acest certificat atestă îndeplinirea prevederilor privind evaluarea și verificarea constanței performanței descrise în anexa ZA a standardului:

**SM SR EN 14782:2010**

**Sistem aplicabil: 4**

Acest certificat a fost emis prima dată la data de 23.03.2021 și va rămâne valabil până la data de 22.03.2024, atât timp cât standardul armonizat, produsul pentru construcții, metodele de evaluare a constanței performanței și condițiile de producție în fabrică nu sunt modificate esențial.

Acest certificat poate fi suspendat sau retras dacă se constată că nu se mențin condițiile în baza cărora a fost emis.

de vizat  
până în  
MARTIE  
2022

de vizat  
până în  
MARTIE  
2023

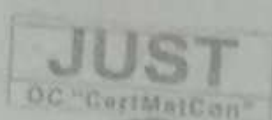


**Director General**

**Ion PUHA**

**Certificat valabil doar cu condiția vizării anuale.**





ORGANISMUL DE CERTIFICARE „CERTMATCON”



# CERTIFICAT DE CONFORMITATE

Nr. de inregistrare

OCpr - 049 11 A010203-21

Data emiterii: 16 august 2021

Valabil până la: 15 august 2026

ORGANISMUL DE CERTIFICARE

OCpr - 049

CERTMATCON mun. Chișinău, str. Uzinelor, 4/2, etaj 4, of. 4, MD2023, tel. 022-903-001; cell. 078-191-001, e-mail: [office@certmatcon.md](mailto:office@certmatcon.md), [WWW.CERTMATCON.MD](http://WWW.CERTMATCON.MD).

PRIN PREZENTUL DOCUMENT SE CONFIRMĂ FAPTUL, CĂ PRODUSELE IDENTIFICATE ASTFEL: DENUMIREA / DESCRIEREA

lămpi, grănduri și lacuri alchidice,  
fabricate conform cerințelor SF38975017-003:2008.  
A se vedea anexa 21 poziții.

Codul NCM

A se vedea anexa

21 poziții

SÎNT CONFORME CU CERINȚELE OBLIGATORII STABILITE ÎN:

SM GOST R 52491:2010 (anulat), pct.5.2.1 tab.1 (ind.1, 2, 3), pct.5.2.2 tab.2 (ind.1-5, 8),  
pct.5.2.5 tab.5 (ind.1-3), pct.5.2.4 tab.4 (ind.1, 3); RNI 06-5.3.35:2001 pct. 2.2.

PRODUCĂTOR

F.P.C. "CHETON GRUP" S.R.L.,  
str. Muncești, 121/1, mun. Chișinău, Republica Moldova.  
Producere: str. Ștefan cel Mare, 148, or. Otaci, r-nul Otaci.

Codul țării

MD

SOLICITANT

Producătorul.

IDNO

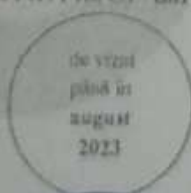
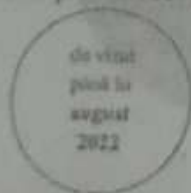
1003600016515

CERTIFICATUL ESTE ELIBERAT ÎN BAZA:

Raport de evaluare final Nr.0152 din 29.07.2021, eliberat de OC "CertMatCon", mun. Chișinău, str. Uzinelor, 4/2, etaj 4, of. 4, MD 2023, certificat de acreditare Nr. OCpr.-049 din 08.05.2018 valabil până la 07.05.2022, eliberat de CNA "MOLDAC"; Raport de încercări Nr. 014/2, 014/3 din 28.05.2021, eliberat de Centrul de Încercări, Expertiză și Cercetare (CIEC) din cadrul "CERTMATCON" SRL, mun. Chișinău, str. Feredeului, 12, MD 2005; Raport de încercări Nr.109 din 16.06.2021, eliberat de L.I. al SRL "Aschim CI", mun. Chișinău, or. Durești, str. T. Vladimirescu, 70, MD 2003, certificat de acreditare Nr. L.I.-014 din 20.10.2017 valabil până la 19.10.2021; Avizur sanitar Nr.P-3595/19 din 25.11.2019, eliberat de Agenția Națională pentru Sănătate Publică, str. Asachi, 67-a, mun. Chișinău, MD 2028.

INFORMAȚII SUPLEMENTARĂ:

Schema 3, conform SM SR EN ISO/CEI 17067:2014. Evaluarea de supraveghere se va efectua o dată în an de către OC "CertMatCon". Certificatul este valabil doar în cazul respectării procesului tehnologic stabilit de către producător și asigurării cu certificat de calitate a fiecărui lot de produs livrat. Domeniu nereglementat. Contract de prestări servicii Nr. 143/CP din 20.04.2021. Certificat valabil doar cu condiția vizării anuale.



Seria A-Nr 008952



PUIHA Ion



În baza prezentei, întreprinderea/pacea/producător de control  
de certificare de conformitate se legalizează în modul stabilit de  
OC „CERTMATCON”, informații pe [www.certmatcon.md](http://www.certmatcon.md)  
Fabricarea certificatelor se pedepsește conform legislației

ORGANISMUL DE CERTIFICARE „CERTMATCON”

# Anexă

Fila File  
1 1

la certificatul de conformitate  
Nr. OCpr - 049 11 A010203-21 din:

16 august 2021

Lista produselor concrete  
asupra cărora se extinde acțiunea certificatului de conformitate

| Nr. | Cod NM<br>MD | Denumirea                                     | Capacitatea<br>ambalajului |
|-----|--------------|-----------------------------------------------|----------------------------|
| 1   | 3210         | Vopsea pe bază de ulei MA-22 "Gama Color"     | 2,0 kg                     |
| 2   | 3208         | Grund-email 3 în 1 "Coloriks"                 | 0,9, 2,7 kg                |
| 3   | 3208         | Grund GF-021 "Nova"                           | 0,9, 2,7, 35,0 kg          |
| 4   | 3208         | Grund GF-021 "Gama Color"                     | 0,9, 2,7, 35,0 kg          |
| 5   | 3208         | Lac colorat "Lazur 350C" Coloriks             | 0,75, 2,5 L.               |
| 6   | 3208         | Lac colorat "Lazur 250C" Gama Color           | 0,75, 2,5 L.               |
| 7   | 3208         | Lac pentru parchet Coloriks                   | 0,75, 3,75 L.              |
| 8   | 3208         | Lac pentru Yaht Coloriks                      | 0,75, 3,75 L.              |
| 9   | 3208         | Grund acrilic pentru piatră și beton Coloriks | 0,75 L.                    |
| 10  | 3208         | Lac PF-170 "Gama Color"                       | 0,7, 1,8 kg                |
| 11  | 3208         | Vopsea termorezistentă "Coloriks"             | 0,25, 0,75 L.              |
| 12  | 3208         | Olifă "Gama Color"                            | 0,4, 0,9 L.                |
| 13  | 3208         | Lac Bezir "Gama Color"                        | 0,4, 0,9 L.                |
| 14  | 3208         | Email PF-115 "Gama Color"                     | 0,9, 2,7 kg                |
| 15  | 3208         | Grund 2 în 1 "Gama Color"                     | 0,9, 2,7, 35,0 kg          |
| 16  | 3208         | Email PF-115 "Nova"                           | 0,8, 2,7 kg                |
| 17  | 3208         | Email Super email "Farbis"                    | 0,7, 2,5 L.                |
| 18  | 3208         | Email PF-115 "Spectrum"                       | 0,9, 2,7 kg                |
| 19  | 3208         | Email PF-115 "Palitra"                        | 0,8, 2,7 kg                |
| 20  | 3208         | Email 3 în 1 Hammer "Farbis"                  | 0,75, 2,5 L.               |
| 21  | 3208         | Email "Coloriks" Premium                      | 0,9, 2,7 kg                |

**JUST**  
OC "CertMatCon"

Seria A № 001645



PUHA Ion



Anexa nu este valabilă în lipsa certificatului de conformitate



ORGANISMUL DE CERTIFICARE „CERTMATCON”

**CERTIFICAT DE CONFORMITATE**

Nr. de inregistrare

**CC-114-2021**

Data emiterii: 26 februarie 2021

Valabil până la: 25 februarie 2024

CERTMATCON mun. Chișinău, str. Uzinelor, 4/2, etaj 4, of. 4, MD2023, tel. 022-903-001; cell. 078-191-001,  
e-mail [office@certmatcon.md](mailto:office@certmatcon.md), [WWW.CERTMATCON.MD](http://WWW.CERTMATCON.MD).

Prin prezentul certificat de conformitate se atestă că produsul

**SÂRMA ROTUNDĂ, TREFILATĂ, NETEDĂ****Grosimi: 2,5; 2,8; 3,0; 3,5; 3,8; 4,0; 4,8; 5,0 și 6,0mm**

fabricată în conformitate cu cerințele SM EN 10218-2:2016,

introdus pe piața și fabricat de către **METPLAS SRL**,

or. Rezina, str. Florilor, 7.

Punct de lucru: or. Rezina, str. Florilor, 7.

este supus de către producător unui control al procesului de producție care cuprinde toate măsurile necesare pentru îndeplinirea și menținerea cerințelor specificate în documentul de referință.

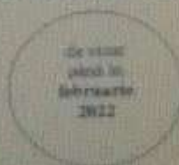
CERTMATCON a efectuat inspecția inițială a procesului de producție și a controlului producției în fabrică (CPF), a evaluat rapoartele de încercări și va efectua supravegherea continuă a procesului de producție, a CPF și a produsului prin încercări pe eșantioane prelevate de la locul de producție.

Schema de certificare aplicabilă: 3, conform SM SR EN ISO/CEI 17067:2014.

Prezentul certificate a fost eliberat inițial la data de 26.02.2021 și rămâne valabil până la data de 25.02.2024, în condițiile în care produsul continuă să fie conform cu cerințele specificate în

documentul de referință și confirmat în urma realizării supravegherii de către CERTMATCON.

Utilizare preconizată: Lucrări de construcții.

**Certificat valabil doar cu condiția vizării anuale.**

PUHA Ion

Conducătorul OC



În atenția antreprinderilor și organelor de control  
Copiile certificatelor de conformitate se legitimează în modul stabilit de  
OC „CERTMATCON”, informându-se asupra termenului de valabilitate  
în funcție de tipul produsului și al procesului de producție.



Seria V X 000508





Page view



Read aloud



Add text

ORGANISMUL DE CERTIFICARE „CERTMATCON”



CertMatCon

**CERTIFICAT DE CONFORMITATE**

Nr. de înregistrare

**CC-115-2021**

Data emiterii: 26 februarie 2021

Valabil până la: 25 februarie 2024

CERTMATCON mun. Chișinău, str. Uzinelor, 4/2, etaj 4, of. 4, MD2023, tel. 022-903-001, cell. 078-191-001,  
e-mail: [office@certmatcon.md](mailto:office@certmatcon.md), [WWW.CERTMATCON.MD](http://WWW.CERTMATCON.MD).

Prin prezentul certificat de conformitate se atestă că produsul

**PLASA SUDATĂ DE ARMARE A BETONULUI**

(a se vedea anexa certificatului-1 filă)

fabricat în conformitate cu cerințele: FIȘE TEHNICE DE REFERINȚĂ

introdus pe piața și fabricat de către METPLAS SRL,

or. Rezina, str. Florilor, 7.

Punct de lucru: or. Rezina, str. Florilor, 7.

este supus de către producător unui control al procesului de producție care cuprinde toate măsurile necesare pentru îndeplinirea și menținerea cerințelor specificate în documentul de referință.

CERTMATCON a efectuat inspecția inițială a procesului de producție și a controlului producției în fabrică (CPF), a evaluat rapoartele de încercări și va efectua supravegherea continuă a procesului de producție, a CPF și a produsului prin încercări pe eșantioane prelevate de la locul de producție.

Schema de certificare aplicabilă: 3, conform SM SR EN ISO/CEI 17067:2014.

Prezentul certificate a fost eliberat inițial la data de 26.02.2021 și rămâne valabil până la data de 25.02.2024, în condițiile în care produsul continuă să fie conform cu cerințele specificate în documentul de referință și confirmat în urma realizării supravegherii de către CERTMATCON.

Utilizare preconizată: Armarea betonului, construcții.

Certificat valabil doar cu condiția vizării anuale.

de vizat  
până în  
februarie  
2022de vizat  
până în  
februarie  
2023

Seria V N 000506



Conducătorul OC

PUHA Ion

În atenția antreprenorilor și organelor de control!  
Copiile certificatelor de conformitate se legalizează în modul stabilit de  
OC „CERTMATCON”, informații pe [www.certmatcon.md](http://www.certmatcon.md)  
Fără circulație publică și se păstrează în arhivă.





ORGANISMUL DE CERTIFICARE „CERTMATCON”

**Anexă**Fila  
1File  
1la certificatul de conformitate  
Nr. **CC-115-2021**

din: 26 februarie 2021

Lista produselor concrete  
asupra cărora se extinde acțiunea certificatului de conformitate

| Grosime (mm)                           | Lățime (mm) / Lungime (mm) | Dimensiunea ochiului (mm)                                      | Fișa tehnică (nr.) |
|----------------------------------------|----------------------------|----------------------------------------------------------------|--------------------|
| 3,5; 3,8 și 4,0                        | 2000x1000                  | 100x100<br>150x150<br>200x200                                  | I(E-G)PS/2021      |
| 2,5; 2,8 și 3,0                        | 2000x1000                  | 50x50<br>100x100<br>150x150<br>200x200                         | I(A-D)PS/2021      |
| 3,0; 3,5; 3,8; 4,0;<br>4,8; 5,0 și 6,0 | 6000x2000                  | 100x100<br>100x150<br>100x200<br>200x100<br>200x150<br>200x200 | I(A-F)PS/2021      |

Seria A Nr. 001671



Conducătorul OC

Anexa nu este valabilă în lipsa certificatului de conformitate

PUHA Ion





# СЕРТИФИКАТ

## СООТВЕТСТВИЯ ЗАВОДСКОГО ПРОИЗВОДСТВЕННОГО КОНТРОЛЯ № CPF-096-2021

В соответствии с постановлением правительства № 913 от 25.07.2016 об утверждении  
Технического регламента о минимальных требованиях к поставкам строительной  
продукции.

**Гидроизоляционные битумосодержащие материалы:**  
**мастики, праймеры, гидроизоляция**  
**согласно ПРИЛОЖЕНИЮ – один лист**

Произведённые: ООО «Завод Технофлекс», Воскресенский филиал  
ул. Промплощадка, 5 В, г. Воскресенск, Московская обл., Россия

Место производства: ул. Промплощадка, 5 В, г. Воскресенск, Московская обл., Россия

Настоящим сертификатом подтверждается, что обеспечены все требования при  
проведении контроля производства и подтверждения постоянства эксплуатационных  
свойств продукции на производстве согласно спецификации продукции и

**ЕТМ 02/03-047:2021**

Орган по сертификации произвел контроль производства и подтверждения постоянства эксплуатационных  
свойств продукции и подтверждает, что все прописанные требования стандарта для контроля продукции на  
производстве соответствуют заданным требованиям.

Сертификат выдан впервые, с 28.12.2021 и действителен до 27.12.2026 при условии сохранения всех  
требований, установленных на момент проведения сертификационных работ и если не изменены требования  
к методам испытаний и /или контроль производства и обеспечения контроля качества продукции, на  
производстве, включенные в гармонизированном стандарте.

Инспекционный контроль производится один раз в год на протяжении действия сертификата соответствия и  
подтверждается протоколами инспекционного контроля. Орган сертификации обязуется приостановить,  
изъять или аннулировать настоящий сертификат в случае несоблюдения требований установленных при  
выдаче сертификата.



Генеральный Директор  
Ион ПУХА



**ПРИЛОЖЕНИЕ**  
**к СЕРТИФИКАТУ О ПОДТВЕРЖДЕНИИ СООТВЕТСТВИЯ ЗАВОДСКОГО**  
**ПРОИЗВОДСТВЕННОГО КОНТРОЛЯ**  
**№ CPF-096-2021**

| №   | Наименование товара                                         | Объем/масса упаковки   |
|-----|-------------------------------------------------------------|------------------------|
| 1.  | Праймер битумный ТЕХНОНИКОЛЬ №01                            | 10л<br>20л             |
| 2.  | Гидроизоляция битумная универсальная AquaMast морозостойкая | 15кг                   |
| 3.  | Праймер битумный универсальный AquaMast, морозостойкий      | 15кг                   |
| 4.  | Праймер битумный AquaMast                                   | 18л<br>10л<br>3л       |
| 5.  | Мастика приклеивающая ТЕХНОНИКОЛЬ №27                       | 22кг<br>12кг           |
| 6.  | Мастика кровельная ТЕХНОНИКОЛЬ №21 (Техномаст)              | 20кг<br>10кг<br>3кг    |
| 7.  | Мастика для ремонта AquaMast                                | 18кг<br>10кг<br>3кг    |
| 8.  | Мастика для гибкой черепицы ТЕХНОНИКОЛЬ №23 (Фиксер)        | 12кг<br>3,6кг<br>0,4кг |
| 9.  | Мастика гидроизоляционная ТЕХНОНИКОЛЬ №24 (МГТН)            | 20 кг<br>10 кг<br>3кг  |
| 10. | Мастика битумно-резиновая AquaMast                          | 18кг<br>10кг<br>3кг    |
| 11. | Мастика битумная AquaMast                                   | 18кг<br>10кг<br>3кг    |

**Генеральный Директор**

**Ион ПУХА**




# CERTIFICAT

## DE CONFORMITATE A CONTROLULUI PRODUCȚIEI ÎN FABRICĂ

Numărul: CPF-096-2021

În conformitate cu Hotărârea de Guvern Nr. 913 din 25.07.2016 privind aprobarea Reglementării tehnice cu privire la cerințele minime pentru comercializarea produselor pentru construcții, acest certificat se aplică pentru:

**Materiale hidroizolante cu conținut de bitum:**  
**masticuri, etanșant, amorse**  
**conform ANEXEI – una filă**

Produse de: **ООО «Завод Технофлекс», filiala Voskresensk**  
**str. Promploșciadka, 5 V, or. Voskresensk, reg. Moskova, Rusia**  
Loc de producție: **str. Promploșciadka, 5 V, or. Voskresensk, reg. Moskova, Rusia**

Acest certificat atestă îndeplinirea prevederilor privind asigurarea evaluării controlului producției în fabrică și verificarea constanței performanței descrise în fișele de produs și

**ETM 02/03-047:2021**

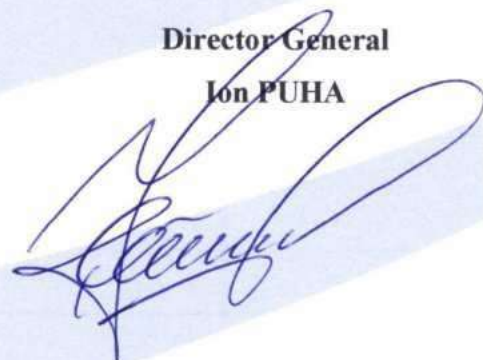
Organismul de certificare a efectuat controlul producției în fabrică, a confirmat verificarea continuă a constanței performanței la producător și confirmă că sunt respectate cerințele esențiale a standardelor de produs

Acest certificat a fost emis prima dată la data de 28.12.2021 și va rămâne valabil până la data de 27.12.2026, atât timp cât produsul pentru construcții, metodele de evaluare a constanței performanței și condițiile de producție în fabrică nu sunt modificate esențial.

Evaluarea de supraveghere se va realiza o dată pe an în perioada de valabilitate a certificatului de conformitate, rezultatul evaluării va fi confirmat prin raport de evaluare de supraveghere. Acest certificat poate fi suspendat sau retras dacă se constată că nu se mențin condițiile în baza cărora a fost emis.



Director General  
**Ion PUHA**





**ANEXA**

**la CERTIFICATUL DE CONFORMITATE A CONTROLULUI PRODUCȚIEI ÎN FABRICĂ**  
**Nr. CPF-096-2021**

| Nr  | Denumire produs                                                          | Volum/masa ambalaj     |
|-----|--------------------------------------------------------------------------|------------------------|
| 1.  | Amorsă bituminoasă ТЕХНОНИКОЛЬ №01                                       | 10l<br>20l             |
| 2.  | Etanșant bituminos universal AquaMast rezistent la îngheț                | 15kg                   |
| 3.  | Amorsă bituminoasă universală AquaMast, rezistentă la îngheț             | 15kg                   |
| 4.  | Amorsă bituminoasă AquaMast                                              | 18l<br>10l<br>3l       |
| 5.  | Mastic adeziv ТЕХНОНИКОЛЬ №27                                            | 22kg<br>12kg           |
| 6.  | Mastic pentru învelitori ТЕХНОНИКОЛЬ №21 (Техномаст)                     | 20kg<br>10kg<br>3kg    |
| 7.  | Mastic pentru reparații AquaMast                                         | 18kg<br>10kg<br>3kg    |
| 8.  | Mastic pentru șindrilă bituminoasă flexibilă<br>ТЕХНОНИКОЛЬ №23 (Фиксер) | 12kg<br>3,6kg<br>0,4kg |
| 9.  | Mastic hidroizolant ТЕХНОНИКОЛЬ №24 (МГТН)                               | 20 kg<br>10 kg<br>3kg  |
| 10. | Mastic bitum-cauciuc AquaMast                                            | 18kg<br>10kg<br>3kg    |
| 11. | Mastic bituminos AquaMast                                                | 18kg<br>10kg<br>3kg    |

**Director General**

**Ion PUHA**








# МЕХАНИЧЕСКИ ЗАКРЕПЛЯЕМАЯ КРОВЛЯ

Механическое закрепление гидроизоляционных пленок является наиболее распространенной системой фиксирования. Оно отличается очень быстрым проведением и приемлемой ценой. Такое закрепление типично для легких кровельных конструкций с несущим слоем из трапецидальной жести, однако, находит свое применение и на других обычных основаниях типа бетона и дерева. Закрепление проводится к несущему слою кровли, т.н. слою закрепления.

[FATRAFOL 810/V \(810\)](#)



## СПЕЦИФИКАЦИЯ

1. Отлив из ПВХ-металла FATRANYL



4. Угловая планка из ПВХ металла FATRANYL
5. Профилированный лист
6. Объемная фасонная часть — волнообразный круг
7. Объемная фасонная часть — конус
8. Разделительный слой – стеклоткань
9. Мембрана FATRAFOL 810 (804) из PVC-P
10. Мембрана FATRAFOL 810 (804) из PVC-P
11. Теплоизоляция – полистирол
12. Теплоизоляция – минеральная вата
13. Пароизоляционный слой



# СЕРТИФИКАТ

## ПОСТОЯНСТВА ЭКСПЛУАТАЦИОННЫХ СВОЙСТВ ПРОДУКЦИИ № CPP-093-2021

В соответствии с постановлением правительства № 913 от 25.07.2016 об утверждении  
Технического регламента о минимальных требованиях к поставкам строительной  
продукции.

**Материалы гидроизоляционные для зданий и сооружений**  
**Слои подкладочные для дискретных кровель**  
согласно ПРИЛОЖЕНИЮ –один лист

Произведённые: ООО «Завод Технофлекс»,  
ул. Прижелезнодорожная, 5, г. Рязань, Россия

Место производства: ул. Прижелезнодорожная, 5, г. Рязань, Россия

Настоящим сертификатом подтверждается, что обеспечены все требования при  
проведении контроля производства и подтверждения постоянства эксплуатационных  
свойств продукции на производстве согласно спецификации приложения ZA  
гармонизированного стандарта

**SM EN 13859-1:2010**

Орган по сертификации произвел контроль производства и подтверждения постоянства  
эксплуатационных свойств продукции и подтверждает, что все прописанные требования стандарта  
для контроля продукции на производстве соответствуют заданным требованиям по системе 1.

Сертификат выдан впервые, с 28.12.2021 и действителен до 27.12.2026 при условии сохранения всех  
требований, установленных на момент проведения сертификационных работ и если не изменены  
требования к методам испытаний и /или контроль производства и обеспечения контроля качества продукции, на  
производстве, включенные в гармонизированном стандарте.

Инспекционный контроль производится один раз в год на протяжении действия сертификата соответствия и  
подтверждается протоколами инспекционного контроля. Орган сертификации обязуется приостановить, изъять или  
аннулировать настоящий сертификат в случае несоблюдения требований установленных при выдаче сертификата.

Генеральный Директор  
Ион ПУХА





**ПРИЛОЖЕНИЕ**

**к СЕРТИФИКАТУ О ПОДТВЕРЖДЕНИИ ПОСТОЯНСТВА № CPP-092-2021**

| №                                               | Наименование товара                        | Тип | Длина рулона, м |
|-------------------------------------------------|--------------------------------------------|-----|-----------------|
| <b>Слои подкладочные для дискретных кровель</b> |                                            |     |                 |
| 1                                               | Подкладочный ковёр ANDEREP PROF            | ЭЭЭ | 40              |
| 2                                               | Подкладочный ковер ANDEREP PROF (S)        | ЭЭМ | 25              |
| 3                                               | Подкладочный ковер ANDEREP GL              | ХММ | 15              |
| 4                                               | Подкладочный ковер ANDEREP ULTRA           | ЭМС | 15              |
| 5                                               | Подкладочный ковер под Гибкую черепицу ХММ | ХММ | 15              |

Генеральный Директор

Ион ПУХА



# CERTIFICAT

## DE CONSTANTĂ A PERFORMANȚEI PRODUSULUI

**Numărul: CPP-093-2021**

În conformitate cu Hotărârea de Guvern Nr. 913 din 25.07.2016 privind aprobarea Reglementării tehnice cu privire la cerințele minime pentru comercializarea produselor pentru construcții, acest certificat se aplică pentru:

**Materiale hidroizolatoare pentru cladiri si structuri  
Straturi de bază pentru acoperișuri discrete  
Conform ANEXEI – una filă**

**Produse de: ООО «Завод Технофлекс»,  
Str. Prijeleznodorojnaia, 5, or. Reazani, Rusia**

**Loc de producție: Str. Prijeleznodorojnaia, 5, or. Reazani, Rusia**

Acest certificat atestă îndeplinirea prevederilor privind asigurarea evaluării controlului producției în fabrică și verificarea constanței performanței descrise în fișele de produs și descrise în anexa ZA a standardului armonizat:

**SM EN 13859-1:2010**

Organismul de certificare a efectuat controlul producției în fabrică, a confirmat verificarea continuă a constanței performanței la producător și confirmă că sunt respectate cerințele esențiale a standardelor de produs și a standardului ar în conformitate cu sistemul 1.

Acest certificat a fost emis prima dată la data de 28.12.2021 și va rămâne valabil până la data de 27.12.2026, atât timp cât produsul pentru construcții, metodele de evaluare a constanței performanței și condițiile de producție în fabrică conform standardului armonizat nu sunt modificate esențial.

Evaluarea de supraveghere se va realiza o dată pe an în perioada de valabilitate a certificatului de conformitate, rezultatul evaluării va fi confirmat prin raport de evaluare de supraveghere. Acest certificat poate fi suspendat sau retras dacă se constată că nu se mențin condițiile în baza cărora a fost emis.



**Director General  
Ion PUHA**



**ANEXA**

**La CERTIFICATUL DE VERIFICARE A CONSTANTEI PERFORMANȚEI № CPP-093-2021**

| №                                                   | Denumire produs                       | Tip | Lungime<br>Rulou, m |
|-----------------------------------------------------|---------------------------------------|-----|---------------------|
| <b>Straturi de bază pentru acoperișuri discrete</b> |                                       |     |                     |
| 1                                                   | Căptușeală ANDEREP PROF               | ЭЭЭ | 40                  |
| 2                                                   | Căptușeală ANDEREP PROF (S)           | ЭЭМ | 25                  |
| 3                                                   | Căptușeală ANDEREP GL                 | XMM | 15                  |
| 4                                                   | Căptușeală ANDEREP ULTRA              | ЭМС | 15                  |
| 5                                                   | Căptușeală sub Șindrila flexibilă XMM | XMM | 15                  |

**Director General**

**Ion PUHA**







**ORGANISMUL DE CERTIFICARE  
PRODUSE ICȘP "INMACOMPROIECT" SRL**  
MD 2015, mun. Chișinău, str. Sarmizegetusa, 15, tel: +37322522066



## **CERTIFICAT DE CONSTANȚĂ A PERFORMANȚEI**

**OCpr-018 11A 1441-19**

În conformitate cu Reglementarea Tehnică cu privire la cerințele minime pentru comercializarea produselor pentru construcții aprobată prin Hotărîrea Guvernului Republicii Moldova nr.913 din 25.07.2016.

### **CIMENT PORTLAND EN 197-1 - CEM I 42,5 N**

Domeniu de utilizare: prepararea betonului, mortarului, pastei și altor amestecuri pentru construcții și pentru fabricarea produselor pentru construcții.

Fabricat de:

**COMBINATUL DE CIMENT DIN RÎBNIȚA S.A.T.Î Republica Moldova**  
**or. Rîbnița, str. P. Zaporojeț, nr.1, Raion Rîbnița**  
**tel.0037355576340, fax.0037355576533**

Acest certificat atestă:

îndeplinirea tuturor prevederilor privind evaluarea și verificarea constanței performanței specificate în anexa ZA a standardului

**SM SR EN 197-1:2014 - SISTEM 1+**

**(EN 197-1:2011)**

realizarea performanțelor declarate în acest certificat și evaluarea controlului producției în fabrică, efectuat de către fabricant, pentru a asigura:

**CONSTANȚĂ A PERFORMANȚEI PRODUSELOR PENTRU CONSTRUCȚII.**

Acest certificat a fost emis inițial 08.08.2019, modificat 01.06.2020, modificat 09.08.2022 și rămâne valabil atâta timp cât nu sunt modificate semnificativ: standardul armonizat, produsul pentru construcții, metodele de evaluare și verificare a constanței performanței și a condițiilor de fabricație, în afară de cazul în care este suspendat sau retras de organismul acreditat de certificare a produsului - OCpr ICȘP "Inmacomproiect" SRL.

Valabilitatea certificatului este condiționată de efectuarea anuală a supravegherii și a evaluării continue a controlului producției în fabrică confirmată prin rapoartele rezultate. Certificatul poate fi suspendat sau retras, dacă se constată că nu se mențin condițiile în baza cărora a fost emis.

Data emiterii: 08.08.2019

Data ultimei modificări: 09.08.2022

№ 00176

Conducătorul organismului



E.Oprea



# CERTIFICAT DE CONSTANȚĂ A PERFORMANȚEI

OCpr-018 11A 1441-19

CIMENT PORTLAND EN 197-1 - CEM I 42,5 N

| Caracteristici esențiale                 | Performanța    |
|------------------------------------------|----------------|
| Rezistența inițială la compresiune (MPa) | ≥ 10,0         |
| Rezistența standard la compresiune (MPa) | ≥ 42,5; ≤ 62,5 |
| Timp inițial de priză (min)              | ≥ 60           |
| Reziduu insolubil (%)                    | ≤ 5,0          |
| Pierdere la calcinare(%)                 | ≤ 5,0          |
| Stabilitate (mm)                         | ≤ 10           |
| Conținutul de SO <sub>3</sub> (%)        | ≤ 3,5          |
| Conținutul de cloruri (%)                | ≤ 0,10         |
| Compoziție (clincer) (%)                 | 95 -100        |

NOTA : Menținerea în valabilitate a certificatului de constanță a performanței este condiționată de îndeplinirea cerințelor menționate în certificat, efectuarea supravegheților și a plăților la termenele stabilite prin contract.

## VIZA PERIODICA:

### PERIOADA INIȚIALĂ

| Anul | Data limită pînă la care trebuie obținută viza periodică | Data obținerii vizei periodice |  <p>Viza periodică<br/>Termen de valabilitate<br/>2019<br/>ORGANISMUL<br/>DE CERTIFICARE<br/>PRODUSE<br/>Semnătură/Stampilă</p> |
|------|----------------------------------------------------------|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2019 | 08.09.2019                                               | 04.09.2019                     |                                                                                                                                                                                                                      |
|      | 08.10.2019                                               | 09.10.2019                     |                                                                                                                                                                                                                      |
|      | 08.11.2019                                               | 08.11.2019                     |                                                                                                                                                                                                                      |

NOTA: Viza pentru menținerea certificării se acordă pe baza rapoartelor de evaluare.

### PERIOADA DE SUPRAVEGHERE

| Tipul de activitate de supraveghere | Anul | Data limită pînă la care trebuie obținută viza periodică | Data obținerii vizei periodice |  <p>Viza periodică<br/>Termen de valabilitate<br/>08.08.2020<br/>ORGANISMUL<br/>DE CERTIFICARE<br/>PRODUSE<br/>Semnătură/Stampilă</p> |
|-------------------------------------|------|----------------------------------------------------------|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supraveghere periodică              | 2020 | 08.08.2020                                               | 07.08.2020                     |                                                                                                                                                                                                                            |
|                                     | 2021 | 08.08.2021                                               | 06.08.2021                     |                                                                                                                                                                                                                            |
|                                     | 2022 | 08.08.2022                                               | 05.08.2022                     |                                                                                                                                                                                                                            |
|                                     | 2023 | 08.08.2023                                               | 04.08.2023                     |                                                                                                                                                                                                                            |
|                                     | 2024 | 08.08.2024                                               | 03.08.2024                     |                                                                                                                                                                                                                            |

NOTA: Între două acțiuni de supraveghere periodică se efectuează la 2 luni încercări de audit pe probe în baza cărora se acordă menținerea vizei.





**ORGANISMUL DE CERTIFICARE  
PRODUSE ICȘP "INMACOMPROIECT" SRL**

MD 2015, mun. Chișinău, str. Sarmizegetusa, 15, tel: +37322522066



## **CERTIFICAT DE CONSTANȚĂ A PERFORMANȚEI**

**OCpr-018 11A 1442-19**

În conformitate cu Reglementarea Tehnică cu privire la cerințele minime pentru comercializarea produselor pentru construcții aprobată prin Hotărârea Guvernului Republicii Moldova nr.913 din 25.07.2016.

### **CIMENT PORTLAND EN 197-1 - CEM I 42,5 R**

Domeniu de utilizare: prepararea betonului, mortarului, pasteii și altor amestecuri pentru construcții și pentru fabricarea produselor pentru construcții.

Fabricat de:

**COMBINATUL DE CIMENT DIN RÎBNIȚA S.A.T.Î Republica Moldova  
or. Rîbnița, str. P. Zaporojeț, nr.1, Raion Rîbnița  
tel.0037355576340, fax.0037355576533**

Acest certificat atestă:

îndeplinirea tuturor prevederilor privind evaluarea și verificarea constanței performanței specificate în anexa ZA a standardului

**SM SR EN 197-1:2014 - SISTEM I+**

(EN 197-1:2011)

realizarea performanțelor declarate în acest certificat și evaluarea controlului producției în fabrică, efectuat de către fabricant, pentru a asigura:

**CONSTANȚA PERFORMANȚEI PRODUSELOR PENTRU CONSTRUCȚII.**

Acest certificat a fost emis inițial 08.08.2019, modificat 01.06.2020, modificat 09.08.2022 și rămâne valabil atâta timp cât nu sunt modificate semnificativ: standardul armonizat, produsul pentru construcții, metodele de evaluare și verificare a constanței performanței și a condițiilor de fabricație, în afară de cazul în care este suspendat sau retras de organismul acreditat de certificare a produsului - OCpr ICȘP "Inmacomproiect" SRL.

Valabilitatea certificatului este condiționată de efectuarea anuală a supravegherii și a evaluării continue a controlului producției în fabrică confirmată prin rapoartele rezultate. Certificatul poate fi suspendat sau retras, dacă se constată că nu se mențin condițiile în baza cărora a fost emis.

Data emiterii: 08.08.2019

Data ultimei modificări: 09.08.2022

№ 00177

**Conducătorul organismului**



**E. Oprea**



# CERTIFICAT DE CONSTANȚĂ A PERFORMANȚEI

OCpr-018 11A 1442-19

CIMENT PORTLAND EN 197-1 - CEM I 42,5 R

| Caracteristici esențiale                 | Performanța    |
|------------------------------------------|----------------|
| Rezistența inițială la compresiune (MPa) | ≥ 20,0         |
| Rezistența standard la compresiune (MPa) | ≥ 42,5; ≤ 62,5 |
| Timp inițial de priză (min)              | ≥ 60           |
| Reziduu insolubil (%)                    | ≤ 5,0          |
| Pierdere la calcinare (%)                | ≤ 5,0          |
| Stabilitate (mm)                         | ≤ 10           |
| Conținutul de SO <sub>3</sub> (%)        | ≤ 4,0          |
| Conținutul de cloruri (%)                | ≤ 0,10         |
| Compoziție (clincer) (%)                 | 95 -100        |

NOTA : Menținerea în valabilitate a certificatului de constanță a performanței este condiționată de îndeplinirea cerințelor menționate în certificat, efectuarea supravegheților și a plășilor la termenele stabilite prin contract.

## VIZA PERIODICA: PERIOADA ÎNȚĂLĂ

| Anul | Data limită pînă la care trebuie obținută viza periodică | Data obținerii vizei periodice |  |
|------|----------------------------------------------------------|--------------------------------|---------------------------------------------------------------------------------------|
| 2019 | 08.09.2019                                               | 04.09.2019                     |                                                                                       |
|      | 08.10.2019                                               | 09.10.2019                     |                                                                                       |
|      | 08.11.2019                                               | 08.11.2019                     |                                                                                       |

NOTA: Viza pentru menținerea certificării se acordă pe baza rapoartelor de evaluare.

## PERIOADA DE SUPRAVEGHERE

| Tipul de activitate de supraveghere | Anul | Data limită pînă la care trebuie obținută viza periodică | Data obținerii vizei periodice |  |
|-------------------------------------|------|----------------------------------------------------------|--------------------------------|---------------------------------------------------------------------------------------|
| Supraveghere periodică              | 2020 | 08.08.2020                                               | 08.08.2020                     |                                                                                       |
|                                     | 2021 | 08.08.2021                                               | 08.08.2021                     |                                                                                       |
|                                     | 2022 | 08.08.2022                                               | 08.08.2022                     |                                                                                       |
|                                     | 2023 | 08.08.2023                                               | 08.08.2023                     |                                                                                       |
|                                     | 2024 | 08.08.2024                                               | 08.08.2024                     |                                                                                       |

NOTA: Între două acțiuni de supraveghere periodică se efectuează la 2 luni încercări de audit pe probe în baza cărora se acordă menținerea vizei.

№ 00177





**OCpr-018 11A 1674-22**

**În conformitate cu Reglementarea Tehnică cu privire la cerințele minime pentru comercializarea produselor pentru construcții aprobată prin Hotărârea Guvernului Republicii Moldova nr.913 din 25.07.2016.**

**CIMENT PUZZOLANIC EN 197-1 - CEM IV/A (P) 42,5 N - SR**

**Domeniu de utilizare:** prepararea betonului, mortarului, pastei și altor amestecuri pentru construcții și pentru fabricarea produselor pentru construcții.

**Fabricat de:**

**COMBINATUL DE CIMENT DIN RÎBNIȚA S.A.T.Î**  
**Republica Moldova or.Rîbnița, str. P.Zaporojeț, nr.1,Raion Rîbnița**  
**tel.0037355576340, fax.0037355576533**

**Acest certificat atestă:**

**indeplinirea tuturor prevederilor privind evaluarea și verificarea constanței performanței specificate în anexa ZA a standardului**

**SM SR EN 197-1:2014 - SISTEM 1+  
(EN 197-1:2011)**

realizarea performanțelor declarate în acest certificat și evaluarea controlului producției în fabrică, efectuat de către fabricant, pentru a asigura:

**CONSTANTA PERFORMANTEI PRODUSELOR PENTRU CONSTRUCTII.**

Acest certificat a fost emis inițial 03.11.2022 și rămâne valabil atâta timp cât nu sunt modificate semnificativ: standardul armonizat, produsul pentru construcții, metodele de evaluare și verificare a constanței performanței și a condițiilor de fabricație, în afară de cazul în care este suspendat sau retras de organismul acreditat de certificare a produsului - OCpr ICȘP “Inmacomproiect” SRL. Valabilitatea certificatului este condiționată de efectuarea anuală a supravegherii și a evaluării continue a controlului producției în fabrică confirmată prin rapoartele rezultate. Certificatul poate fi suspendat sau retras, dacă se constată că nu se mențin condițiile în baza cărora a fost emis.

**Data emetirii: 03.11.2022**

№ 00196

## Conducătorul organizației

**E.Oprea**





# CERTIFICAT DE CONSTANȚĂ A PERFORMANȚEI

OCpr-018 11A 1674-22

CIMENT PUZZOLANIC EN 197-1 - CEM IV/A (P) 42,5 N - SR

| Caracteristici esențiale                 | Performanța            |
|------------------------------------------|------------------------|
| Rezistența inițială la compresiune (MPa) | $\geq 10,0$            |
| Rezistența standard la compresiune (MPa) | $\geq 42,5; \leq 62,5$ |
| Timp inițial de priză (min)              | $\geq 60$              |
| Stabilitate (mm)                         | $\leq 10$              |
| Conținutul de SO <sub>3</sub> (%)        | $\leq 3,0$             |
| Conținutul de cloruri (%)                | $\leq 0,10$            |
| Compoziție (clinker) (%)                 | 65-89                  |
| C <sub>3</sub> A din clinker (%)         | $\leq 9$               |
| Puzzolanicitate                          | Satisface încercarea   |

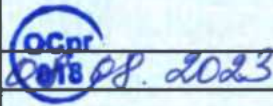
NOTA : Menținerea în valabilitate a certificatului de constanță a performanței este condiționată de îndeplinirea cerințelor menționate în certificat, efectuarea supravegheților și a plăților la termenele stabilite prin contract.

## VIZA PERIODICĂ: PERIODA ÎNȚĂLĂ

| Anul      | Data limită pînă la care trebuie obținută Viza periodică | Data obținerii vizei periodice |  |
|-----------|----------------------------------------------------------|--------------------------------|---------------------------------------------------------------------------------------|
| 2022/2023 | 03.12.2022                                               | 07.12.2022                     |                                                                                       |
|           | 03.01.2023                                               | 11.01.2023                     |                                                                                       |
|           | 03.02.2023                                               | 08.02.2023                     |                                                                                       |

NOTA: Viza pentru menținerea certificării se acordă pe baza rapoartelor de evaluare.

## PERIOADA DE SUPRAVEGHERE

| Tipul de activitate de supraveghere | Anul | Data limită pînă la care trebuie obținută viza periodică | Data obținerii vizei periodice                                                       |  |
|-------------------------------------|------|----------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Supraveghere periodică              | 2023 | 03.11.2023                                               |  |                                                                                       |
|                                     | 2024 | 03.11.2024                                               |                                                                                      |                                                                                       |
|                                     | 2025 | 03.11.2025                                               |                                                                                      |                                                                                       |
|                                     | 2026 | 03.11.2026                                               |                                                                                      |                                                                                       |
|                                     | 2027 | 03.11.2027                                               |                                                                                      |                                                                                       |

NOTA: Între două acțiuni de supraveghere periodică se efectuează la 2 luni încercări de audit pe probe în baza cărora se acordă menținerea vizei





**ORGANISMUL DE CERTIFICARE  
PRODUSE ICȘP "INMACOMPROIECT" SRL**

MD 2015, mun. Chișinău, str. Sarmizegetusa, 15, tel: +37322522066



## **CERTIFICAT DE CONSTANȚĂ A PERFORMANȚEI**

**OCpr-018 11A 1445-19**

În conformitate cu Reglementarea Tehnică cu privire la cerințele minime pentru comercializarea produselor pentru construcții aprobată prin Hotărîrea Guvernului Republicii Moldova nr.913 din 25.07.2016.

**CIMENT PORTLAND CU CALCAR EN 197-1 - CEM II/B-LL 32,5 R**

Domeniu de utilizare: prepararea betonului, mortarului, pastei și altor amestecuri pentru construcții și pentru fabricarea produselor pentru construcții.

Fabricat de:

**COMBINATUL DE CIMENT DIN RÎBNIȚA S.A.T.Î Republica Moldova  
or. Rîbnița, str. P. Zaporojet, nr.1, Raion Rîbnița  
tel.0037355576340, fax.0037355576533**

Acest certificat atestă:

îndeplinirea tuturor prevederilor privind evaluarea și verificarea constanței performanței specificate în anexa ZA a standardului

**SM SR EN 197-1:2014 - SISTEM 1+  
(EN 197-1:2011)**

realizarea performanțelor declarate în acest certificat și evaluarea controlului producției în fabrică, efectuat de către fabricant, pentru a asigura:

**CONSTANȚA PERFORMANȚEI PRODUSELOR PENTRU CONSTRUCȚII.**

Acest certificat a fost emis inițial 08.08.2019, modificat 01.06.2020, modificat 09.08.2022 și rămâne valabil atâta timp cât nu sunt modificate semnificativ: standardul armonizat, produsul pentru construcții, metodele de evaluare și verificare a constanței performanței și a condițiilor de fabricație, în afară de cazul în care este suspendat sau retras de organismul acreditat de certificare a produsului - OCpr ICȘP "Inmacomproiect" SRL.

Valabilitatea certificatului este condiționată de efectuarea anuală a supravegherii și a evaluării continue a controlului producției în fabrică confirmată prin rapoartele rezultate. Certificatul poate fi suspendat sau retras, dacă se constată că nu se mențin condițiile în baza cărora a fost emis.

Data emiterii: 08.08.2019

Data ultimei modificări: 09.08.2022

№ 00180

Conducătorul organismului



E.Oprea



# CERTIFICAT DE CONSTANȚĂ A PERFORMANȚEI

OCpr-018 11A 1445-19

CIMENT PORTLAND CU CALCAR EN 197-1 - CEM II/B-LL 32,5 R

| Caracteristici esențiale                 | Performanța    |
|------------------------------------------|----------------|
| Rezistența inițială la compresiune (MPa) | ≥ 10,0         |
| Rezistența standard la compresiune (MPa) | ≥ 32,5; ≤ 52,5 |
| Timp inițial de priză (min)              | ≥ 75           |
| Stabilitate (mm)                         | ≤ 10           |
| Conținutul de SO <sub>3</sub> (%)        | ≤ 3,5          |
| Conținutul de cloruri (%)                | ≤ 0,10         |
| Compoziție (clincer) (%)                 | 65-79          |

NOTA : Menținerea în valabilitate a certificatului de constanță a performanței este condiționată de îndeplinirea cerințelor menționate în certificat, efectuarea supravegheților și a plăților la termenele stabilite prin contract.

## VIZA PERIODICA:

### PERIOADA INIȚIALĂ

| Anul | Data limită pînă la care trebuie obținută viza periodică | Data obținerii vizei periodice |  |
|------|----------------------------------------------------------|--------------------------------|---------------------------------------------------------------------------------------|
| 2019 | 08.09.2019                                               | 04.09.2019                     |                                                                                       |
|      | 08.10.2019                                               | 09.10.2019                     |                                                                                       |
|      | 08.11.2019                                               | 08.11.2019                     |                                                                                       |

NOTA: Viza pentru menținerea certificării se acordă pe baza rapoartelor de evaluare.

### PERIOADA DE SUPRAVEGHERE

| Tipul de activitate de supraveghere | Anul | Data limită pînă la care trebuie obținută viza periodică | Data obținerii vizei periodice |  |
|-------------------------------------|------|----------------------------------------------------------|--------------------------------|---------------------------------------------------------------------------------------|
| Supraveghere periodică              | 2020 | 08.08.2020                                               | 07.08.2020                     |                                                                                       |
|                                     | 2021 | 08.08.2021                                               | 08.08.2021                     |                                                                                       |
|                                     | 2022 | 08.08.2022                                               | 08.08.2022                     |                                                                                       |
|                                     | 2023 | 08.08.2023                                               | 08.08.2023                     |                                                                                       |
|                                     | 2024 | 08.08.2024                                               | 08.08.2024                     |                                                                                       |
|                                     |      |                                                          |                                | Semnătura Ștampilă                                                                    |

NOTA: Între două acțiuni de supraveghere periodică se efectuează la 2 luni încercări de audit pe probe în baza cărora se acordă menținerea vizei.





OCpr-018

**ORGANISMUL DE CERTIFICARE  
PRODUSE ICȘP "INMACOMPROIECT" SRL**

MD 2015, mun. Chișinău, str. Sarmizegetusa, 15, tel: +37322522066



## **CERTIFICAT DE CONSTANȚĂ A PERFORMANȚEI**

**OCpr-018 1IA 1443-19**

În conformitate cu Reglementarea Tehnică cu privire la cerințele minime pentru comercializarea produselor pentru construcții aprobată prin Hotărârea Guvernului Republicii Moldova nr.913 din 25.07.2016.

### **CIMENT PORTLAND CU CALCAR EN 197-1 - CEM II/A-LL 42,5 R**

Domeniu de utilizare: prepararea betonului, mortarului, pastei și altor amestecuri pentru construcții și pentru fabricarea produselor pentru construcții.

Fabricat de:

**COMBINATUL DE CIMENT DIN RÎBNIȚA S.A.T.Î Republica Moldova  
or. Rîbnița, str. P. Zaporojeț, nr.1, Raion Rîbnița  
tel.0037355576340, fax.0037355576533**

Acest certificat atestă:

îndeplinirea tuturor prevederilor privind evaluarea și verificarea constanței performanței specificate în anexa ZA a standardului

**SM SR EN 197-1:2014 - SISTEM 1+  
(EN 197-1:2011)**

realizarea performanțelor declarate în acest certificat și evaluarea controlului producției în fabrică, efectuat de către fabricant, pentru a asigura:

**CONSTANȚA PERFORMANȚEI PRODUSELOR PENTRU CONSTRUCȚII.**

Acest certificat a fost emis inițial 08.08.2019, modificat 01.06.2020, modificat 09.08.2022 și rămâne valabil atâta timp cât nu sunt modificate semnificativ: standardul armonizat, produsul pentru construcții, metodele de evaluare și verificare a constanței performanței și a condițiilor de fabricație, în afară de cazul în care este suspendat sau retras de organismul acreditat de certificare a produsului - OCpr ICȘP "Inmacomproiect" SRL.

Valabilitatea certificatului este condiționată de efectuarea anuală a supravegherii și a evaluării continue a controlului producției în fabrică confirmată prin rapoartele rezultate. Certificatul poate fi suspendat sau retras, dacă se constată că nu se mențin condițiile în baza cărora a fost emis.

Data emiterii: 08.08.2019

Data ultimei modificări: 09.08.2022

Conducătorul organismului

E.Oprea

№ 00178





# CERTIFICAT DE CONSTANȚĂ A PERFORMANȚEI

OCpr-018 11A 1443-19

CIMENT PORTLAND CU CALCAR EN 197-1 - CEM II/A-LL 42,5 R

| Caracteristici esențiale                 | Performanța    |
|------------------------------------------|----------------|
| Rezistența inițială la compresiune (MPa) | ≥ 20,0         |
| Rezistența standard la compresiune (MPa) | ≥ 42,5; ≤ 62,5 |
| Timp inițial de priză (min)              | ≥ 60           |
| Stabilitate (mm)                         | ≤ 10           |
| Conținutul de SO <sub>3</sub> (%)        | ≤ 4,0          |
| Conținutul de cloruri (%)                | ≤ 0,10         |
| Compoziție (clincer) (%)                 | 80-94          |

NOTA : Menținerea în valabilitate a certificatului de constanță a performanței este condiționată de îndeplinirea cerințelor menționate în certificat, efectuarea supravegheților și a plăților la termenele stabilite prin contract.

## VIZA PERIODICA: PERIOADA ÎNȚĂLĂ

| Anul | Data limită pînă la care trebuie obținută viza periodică | Data obținerii vizei periodice |  |
|------|----------------------------------------------------------|--------------------------------|---------------------------------------------------------------------------------------|
| 2019 | 08.09.2019                                               | 04.09.2019                     |                                                                                       |
|      | 08.10.2019                                               | 09.10.2019                     |                                                                                       |
|      | 08.11.2019                                               | 08.11.2019                     |                                                                                       |

NOTA: Viza pentru menținerea certificării se acordă pe baza rapoartelor de evaluare.

## PERIOADA DE SUPRAVEGHERE

| Tipul de activitate de supraveghere | Anul | Data limită pînă la care trebuie obținută viza periodică | Data obținerii vizei periodice |  |
|-------------------------------------|------|----------------------------------------------------------|--------------------------------|---------------------------------------------------------------------------------------|
| Supraveghere periodică              | 2020 | 08.08.2020                                               | 08.08.2020                     |                                                                                       |
|                                     | 2021 | 08.08.2021                                               | 08.08.2021                     |                                                                                       |
|                                     | 2022 | 08.08.2022                                               | 08.08.2022                     |                                                                                       |
|                                     | 2023 | 08.08.2023                                               | 08.08.2023                     |                                                                                       |
|                                     | 2024 | 08.08.2024                                               | 08.08.2024                     |                                                                                       |

NOTA: Între două acțiuni de supraveghere periodică se efectuează la 2 luni încercări de audit pe probe în baza cărora se acordă menținerea vizei.





**ORGANISMUL DE CERTIFICARE  
PRODUSE ICȘP "INMACOMPROIECT" SRL**

MD 2015, mun. Chișinău, str. Sarmizegetusa, 15, tel: +37322522066



## **CERTIFICAT DE CONSTANȚĂ A PERFORMANȚEI**

**OCpr-018 1IA 1444-19**

În conformitate cu Reglementarea Tehnică cu privire la cerințele minime pentru comercializarea produselor pentru construcții aprobată prin Hotărîrea Guvernului Republicii Moldova nr.913 din 25.07.2016.

### **CIMENT PORTLAND CU CALCAR EN 197-1 - CEM II/A-LL 32,5 R**

Domeniu de utilizare: prepararea betonului, mortarului, pastei și altor amestecuri pentru construcții și pentru fabricarea produselor pentru construcții.

Fabricat de:

**COMBINATUL DE CIMENT DIN RÎBNIȚA S.A.T.Î Republica Moldova**  
or. Rîbnița, str. P. Zaporojeț, nr.1, Raion Rîbnița  
tel.0037355576340, fax.0037355576533

Acest certificat atestă:

îndeplinirea tuturor prevederilor privind evaluarea și verificarea constanței performanței specificate în anexa ZA a standardului

**SM SR EN 197-1:2014 - SISTEM 1+**

**(EN 197-1:2011)**

realizarea performanțelor declarate în acest certificat și evaluarea controlului producției în fabrică, efectuat de către fabricant, pentru a asigura:

**CONSTANȚA PERFORMANȚEI PRODUSELOR PENTRU CONSTRUCȚII.**

Acest certificat a fost emis inițial 08.08.2019, modificat 01.06.2020, modificat 09.08.2022 și rămâne valabil atâta timp cât nu sunt modificate semnificativ: standardul armonizat, produsul pentru construcții, metodele de evaluare și verificare a constanței performanței și a condițiilor de fabricație, în afară de cazul în care este suspendat sau retras de organismul acreditat de certificare a produsului - OCpr ICȘP "Inmacomproiect" SRL.

Valabilitatea certificatului este condiționată de efectuarea anuală a supravegherii și a evaluării continue a controlului producției în fabrică confirmată prin rapoartele rezultate. Certificatul poate fi suspendat sau retras, dacă se constată că nu se mențin condițiile în baza cărora a fost emis.

Data emiterii: 08.08.2019

Data ultimei modificări: 09.08.2022

Nr 00179

/Conducătorul organismului



*E. Oprea*

**E. Oprea**



# CERTIFICAT DE CONSTANȚĂ A PERFORMANȚEI

OCpr-018 11A 1444-19

CIMENT PORTLAND CU CALCAR EN 197-1 - CEM II/A-LL 32,5 R

| Caracteristici esențiale                 | Performanța    |
|------------------------------------------|----------------|
| Rezistența inițială la compresiune (MPa) | ≥ 10,0         |
| Rezistența standard la compresiune (MPa) | ≥ 32,5; ≤ 52,5 |
| Timp inițial de priză (min)              | ≥ 75           |
| Stabilitate (mm)                         | ≤ 10           |
| Conținutul de SO <sub>3</sub> (%)        | ≤ 3,5          |
| Conținutul de cloruri (%)                | ≤ 0,10         |
| Compoziție (clincer) (%)                 | 80-94          |

NOTA : Menținerea în valabilitate a certificatului de constanță a performanței este condiționată de îndeplinirea cerințelor menționate în certificat, efectuarea supravegheților și a plăților la termenele stabilite prin contract.

## VIZA PERIODICA: PERIOADA ÎNȚĂLĂ

| Anul | Data limită pînă la care trebuie obținută viza periodică | Data obținerii vizei periodice |  |
|------|----------------------------------------------------------|--------------------------------|---------------------------------------------------------------------------------------|
| 2019 | 08.09.2019                                               | 04.09.2019                     |                                                                                       |
|      | 08.10.2019                                               | 09.10.2019                     |                                                                                       |
|      | 08.11.2019                                               | 08.11.2019                     |                                                                                       |

NOTA: Viza pentru menținerea certificării se acordă pe baza rapoartelor de evaluare.

## PERIOADA DE SUPRAVEGHERE

| Tipul de activitate de supraveghere | Anul | Data limită pînă la care trebuie obținută viza periodică | Data obținerii vizei periodice |  |
|-------------------------------------|------|----------------------------------------------------------|--------------------------------|---------------------------------------------------------------------------------------|
| Supraveghere periodică              | 2020 | 08.08.2020                                               | 07.08.2020                     |                                                                                       |
|                                     | 2021 | 08.08.2021                                               | 07.08.2021                     |                                                                                       |
|                                     | 2022 | 08.08.2022                                               | 07.08.2022                     |                                                                                       |
|                                     | 2023 | 08.08.2023                                               | 07.08.2023                     |                                                                                       |
|                                     | 2024 | 08.08.2024                                               | 07.08.2024                     |                                                                                       |

NOTA: Între două acțiuni de supraveghere periodică se efectuează la 2 luni încercări de audit pe probe în baza cărora se acordă menținerea vizei.



## DECLARAȚIE DE PERFORMANȚĂ

Nr. 04PSIBAB

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                          |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | Cod unic de identificare al produsului-tip:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>IsoparetePlisse_Piano_Box</b>                                                                                                                         |
| 2  | Utilizare (utilizari) preconizata (preconizate):<br>Produsele furnizate de către Vânzător Cumpărătorului, cu excepția cazului în care părțile convin altfel în scris, nu contribuie în niciun fel la stabilitatea parțială sau completă a structurii construcției; în concluzie, acestea nu pot susține sarcini verticale - orizontale sau statice de tip permanent (se exclude greutatea proprie și/ sau instalațiile fotovoltaice care ar putea fi instalate pe acestea), având rolul unic de a servi drept acoperire/ învelitoare a unei structuri portante existente a cărei proiectare și realizare trebuie făcută de către Cumpărător pe propria și exclusivă sa răspundere. | <b>Panouri sandwich autoportante, izolante, cu ambele fețe de tablă metalică pentru acoperirea interioară și exterioară a peretelui și a plafoanelor</b> |
| 3  | Fabricant:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>ISOPAN EST: Soseaua De Centura, 109 - 077160, Popești Leordeni (București) RO</b>                                                                     |
| 5  | Sistemul (sistemele) de evaluare și de verificare a constantei performanței:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Sistem 3</b>                                                                                                                                          |
| 6a | Standard armonizat:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>SR EN 14509:2013</b>                                                                                                                                  |
|    | Organism (organisme) notificat(e):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>LGA TECHNOLOGICAL CENTER, S. A.(Applus+) - NB 0370</b><br><br><b>FIRES, S.R.O. - NB 1396</b>                                                          |
| 7  | Performanța (performanțe) declarată (declarat):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Caracteristicile tehnice ale produsului sunt atasate acestei Declarații de Performanță ( pag. 2)</b>                                                  |

Performanța produsului identificat mai sus este în conformitate cu setul de performanțe declarate. Această declarație de performanță este eliberată în conformitate cu Regulamentul (UE) Nr. 305/2011, pe răspunderea exclusivă a fabricantului identificat mai sus.

Semnată pentru și în numele fabricantului de către:

Semnătură:

Nume și funcție:

Toni Pera

Director General

Locul:

Popești Leordeni ( București )

Data:

03.03.2023



Pag 1/2

### SC ISOPAN EST srl

Sediu Social Stabiliment  
Sos De Centura 109, Popesti Leordeni | Jud. ILFOV - 077160 - Romania  
C.I.F. RO17006490 | Cap. Soc: 31.540.000 RON | Nr. Ord.Reg. Com. J23/1860/06.12.2004  
Tel: +40 - 213051600 | Fax: +40 - 213051610  
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www.isopan.com

| Declarație de Performanță - Nr. 04PSIBAB                                                           |                        |                                           |  |                       |
|----------------------------------------------------------------------------------------------------|------------------------|-------------------------------------------|--|-----------------------|
| Caracteristici esențiale:                                                                          | Grosimea panoului [mm] |                                           |  | Specificațiile        |
|                                                                                                    | 100                    |                                           |  | Tehnice Armonizate    |
| Material izolant                                                                                   |                        | ISOPAN PIR                                |  |                       |
| Coeficient de transmisie termică U [W/m²K]                                                         |                        | 0,23                                      |  |                       |
| Conductivitate termică [W/mK]                                                                      |                        | λd= 0,022                                 |  |                       |
| Proprietăți mecanice                                                                               |                        |                                           |  |                       |
| Rezistență la tracțiune [MPa]                                                                      |                        | 0,10                                      |  |                       |
| Rezistență la compresiune [MPa]                                                                    |                        | 0,10                                      |  |                       |
| Rezistență la forfecare [MPa]                                                                      |                        | 0,10                                      |  |                       |
| Rezistență la forfecare pe termen lung[MPa]                                                        |                        | 0,04                                      |  |                       |
| Modul de forfecare [MPa]                                                                           |                        | 2,60                                      |  |                       |
| Coeficient de fluaj t=2000h                                                                        |                        | 0,60                                      |  |                       |
| Coeficient de fluaj t=100000h                                                                      |                        | 1,57                                      |  |                       |
| Rezistența la îndoire* [MPa]                                                                       |                        |                                           |  |                       |
| Față exterioră, în deschidere                                                                      |                        | 93                                        |  |                       |
| Față exterioră, în deschidere<br>( temperatură ridicată )                                          |                        | 89                                        |  |                       |
| Față exterioră, la reazem central                                                                  |                        | 88                                        |  |                       |
| Față exterioră, la reazem central<br>( temperatură ridicată )                                      |                        | 87                                        |  |                       |
| Față interioară, în deschidere                                                                     |                        | 75                                        |  |                       |
| Față interioară, la reazem central                                                                 |                        | 61                                        |  |                       |
| *Factor de conversie Rezistență la îndoiere ( luați in considerare grosimea în funcție de comandă) |                        |                                           |  |                       |
| Grosime placă din oțel [mm]                                                                        |                        | 0,50                                      |  | EN 14509<br>( A5.5.3) |
| Față exterioră                                                                                     |                        | 1,00                                      |  |                       |
| Față interioară                                                                                    |                        | 1,00                                      |  |                       |
| Reacția la foc**                                                                                   |                        |                                           |  |                       |
|                                                                                                    |                        | Bs2d0                                     |  |                       |
| Rezistența la foc**                                                                                |                        |                                           |  |                       |
|                                                                                                    |                        | EI30                                      |  |                       |
| Permeabilitate la apă                                                                              |                        |                                           |  |                       |
|                                                                                                    |                        | NPD                                       |  |                       |
| Permeabilitate la aer [(m³/h)/m² - 50Pa]                                                           |                        | ≤ 1,5                                     |  |                       |
| Permeabilitate la vapori de apă                                                                    |                        | IMPERMEABIL                               |  |                       |
| Izolare la zgomot aerian                                                                           |                        | NPD                                       |  |                       |
| Absorția sunetului                                                                                 |                        | NPD                                       |  |                       |
| Durabilitate                                                                                       |                        | ÎNDEPLINITĂ - TOATE CULORILE              |  |                       |
| Substanțe periculoase                                                                              |                        | NPD                                       |  |                       |
| Descrierea materialului                                                                            |                        |                                           |  |                       |
| Grosime oțel față exterioră [mm]                                                                   |                        | 0,50                                      |  |                       |
| Grosime oțel față interioară [mm]                                                                  |                        | 0,50                                      |  |                       |
| Calitatea oțelului interior și exterior                                                            |                        | S250 GD + Z                               |  |                       |
| Acoperire exterior [μm]                                                                            |                        | Poliester PS 25, SRAL 1015                |  |                       |
| Acoperire interior [μm]                                                                            |                        | Poliester PS 25, SRAL 9010; PVC TOP CLASS |  |                       |
| Densitate [Kg/m³]                                                                                  |                        | 40 +/- 10%                                |  |                       |

(\*\*) Realizarea acestei performanțe este legată de indicațiile conținute în Raportul de clasificare.

(\*) Pentru instalări de pereți

Valorile indică caracteristici minime de performanță ale panoului oferent prezentei D.o.P., conform specificațiilor produsului prezentat în factură și pe fiecare ambalaj. ISOPAN răspunde, în timpul și termenii definiți în actuala Directivă Europeană (1999/44/CE), pentru caracteristicile funcționale ale panourilor sandwich comercializate, cu condiția ca acestea să fie corect depozitate, manipulate, asamblate, utilizate și întreținute în timp; cu respectarea deplină a instrucțiunilor tehnice prevăzute în cataloagele noastre și în specificațiile tehnice ale produsului (disponibile pe site-ul nostru). Vânzarea este reglementată de prevederile Convenției de la Viena privind vânzările internaționale.

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## DECLARAȚIE DE PERFORMANȚĂ

Nr. 04PSIBAB

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                          |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | Cod unic de identificare al produsului-tip:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>IsoparetePlisse_Piano_Box</b>                                                                                                                         |
| 2  | Utilizare (utilizari) preconizata (preconizate):<br>Produsele furnizate de către Vânzător Cumpărătorului, cu excepția cazului în care părțile convin altfel în scris, nu contribuie în niciun fel la stabilitatea parțială sau completă a structurii construcției; în concluzie, acestea nu pot susține sarcini verticale - orizontale sau statice de tip permanent (se exclude greutatea proprie și/ sau instalațiile fotovoltaice care ar putea fi instalate pe acestea), având rolul unic de a servi drept acoperire/ învelitoare a unei structuri portante existente a cărei proiectare și realizare trebuie făcută de către Cumpărător pe propria și exclusivă sa răspundere. | <b>Panouri sandwich autoportante, izolante, cu ambele fețe de tablă metalică pentru acoperirea interioară și exterioară a peretelui și a plafoanelor</b> |
| 3  | Fabricant:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>ISOPAN EST: Soseaua De Centura, 109 - 077160, Popești Leordeni (București) RO</b>                                                                     |
| 5  | Sistemul (sistemele) de evaluare și de verificare a constantei performanței:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Sistem 3</b>                                                                                                                                          |
| 6a | Standard armonizat:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>SR EN 14509:2013</b>                                                                                                                                  |
|    | Organism (organisme) notificat(e):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>LGA TECHNOLOGICAL CENTER, S. A.(Applus+) - NB 0370</b><br><br><b>FIRES, S.R.O. - NB 1396</b>                                                          |
| 7  | Performanța (performanțe) declarată (declarat):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Caracteristicile tehnice ale produsului sunt atasate acestei Declarații de Performanță ( pag. 2)</b>                                                  |

Performanța produsului identificat mai sus este în conformitate cu setul de performanțe declarate. Această declarație de performanță este eliberată în conformitate cu Regulamentul (UE) Nr. 305/2011, pe răspunderea exclusivă a fabricantului identificat mai sus.

Semnată pentru și în numele fabricantului de către:

Semnătură:

Nume și funcție:

Toni Pera

Director General

Locul:

Popești Leordeni ( București )

Data:

03.03.2023



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| Declarație de Performanță - Nr. 04PSIBAB                                                           |                        |                                           |  |                       |
|----------------------------------------------------------------------------------------------------|------------------------|-------------------------------------------|--|-----------------------|
| Caracteristici esențiale:                                                                          | Grosimea panoului [mm] |                                           |  | Specificațiile        |
|                                                                                                    | 100                    |                                           |  | Tehnice Armonizate    |
| Material izolant                                                                                   |                        | ISOPAN PIR                                |  |                       |
| Coeficient de transmisie termică U [W/m²K]                                                         |                        | 0,23                                      |  |                       |
| Conductivitate termică [W/mK]                                                                      |                        | λd= 0,022                                 |  |                       |
| Proprietăți mecanice                                                                               |                        |                                           |  |                       |
| Rezistență la tracțiune [MPa]                                                                      |                        | 0,10                                      |  |                       |
| Rezistență la compresiune [MPa]                                                                    |                        | 0,10                                      |  |                       |
| Rezistență la forfecare [MPa]                                                                      |                        | 0,10                                      |  |                       |
| Rezistență la forfecare pe termen lung[MPa]                                                        |                        | 0,04                                      |  |                       |
| Modul de forfecare [MPa]                                                                           |                        | 2,60                                      |  |                       |
| Coeficient de fluaj t=2000h                                                                        |                        | 0,60                                      |  |                       |
| Coeficient de fluaj t=100000h                                                                      |                        | 1,57                                      |  |                       |
| Rezistența la îndoire* [MPa]                                                                       |                        |                                           |  |                       |
| Față exterioră, în deschidere                                                                      |                        | 93                                        |  |                       |
| Față exterioră, în deschidere<br>( temperatură ridicată )                                          |                        | 89                                        |  |                       |
| Față exterioră, la reazem central                                                                  |                        | 88                                        |  |                       |
| Față exterioră, la reazem central<br>( temperatură ridicată )                                      |                        | 87                                        |  |                       |
| Față interioară, în deschidere                                                                     |                        | 75                                        |  |                       |
| Față interioară, la reazem central                                                                 |                        | 61                                        |  |                       |
| *Factor de conversie Rezistență la îndoiere ( luați in considerare grosimea în funcție de comandă) |                        |                                           |  |                       |
| Grosime placă din oțel [mm]                                                                        |                        | 0,50                                      |  | EN 14509<br>( A5.5.3) |
| Față exterioră                                                                                     |                        | 1,00                                      |  |                       |
| Față interioară                                                                                    |                        | 1,00                                      |  |                       |
| Reacția la foc**                                                                                   |                        |                                           |  |                       |
|                                                                                                    |                        | Bs2d0                                     |  |                       |
| Rezistența la foc**                                                                                |                        |                                           |  |                       |
|                                                                                                    |                        | EI30                                      |  |                       |
| Permeabilitate la apă                                                                              |                        |                                           |  |                       |
|                                                                                                    |                        | NPD                                       |  |                       |
| Permeabilitate la aer [(m³/h)/m² - 50Pa]                                                           |                        | ≤ 1,5                                     |  |                       |
| Permeabilitate la vapori de apă                                                                    |                        | IMPERMEABIL                               |  |                       |
| Izolare la zgomot aerian                                                                           |                        | NPD                                       |  |                       |
| Absorția sunetului                                                                                 |                        | NPD                                       |  |                       |
| Durabilitate                                                                                       |                        | ÎNDEPLINITĂ - TOATE CULORILE              |  |                       |
| Substanțe periculoase                                                                              |                        | NPD                                       |  |                       |
| Descrierea materialului                                                                            |                        |                                           |  |                       |
| Grosime oțel față exterioră [mm]                                                                   |                        | 0,50                                      |  |                       |
| Grosime oțel față interioară [mm]                                                                  |                        | 0,50                                      |  |                       |
| Calitatea oțelului interior și exterior                                                            |                        | S250 GD + Z                               |  |                       |
| Acoperire exterior [μm]                                                                            |                        | Poliester PS 25, SRAL 1015                |  |                       |
| Acoperire interior [μm]                                                                            |                        | Poliester PS 25, SRAL 9010; PVC TOP CLASS |  |                       |
| Densitate [Kg/m³]                                                                                  |                        | 40 +/- 10%                                |  |                       |

(\*\*) Realizarea acestei performanțe este legată de indicațiile conținute în Raportul de clasificare.

(\*) Pentru instalări de pereți

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