



TMK-ARTROM S.A.

Draganesti Str. 30, Slatina, jud. OLT, Romania 230119

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Fax: +40 (249) 434330, 437288

E-mail: office.slatina@tmk-artrom.eu www.tmk-artrom.eu

EUID: ROONRC.J28/9/1991; J28/9/31.01.1991

VAT No. RO 1510210/1992

Subscribed and Paid Share Capital: 291.587.538,34 lei

INSPECTION CERTIFICATE - EN 10204: 2004 / 3.1

No : I 2764 Date: 07.04.2021	Sigla fabricii: Manufacturer's mark:		Comanda client nr. : Customer order No.:	PL: 0929
CLIENT / CUSTOMER- NIMFA-COM SRL				
Specificatii / Specification: EN10210-1:06/ EN10210-2:19; PED 2014/68/EU+EN 10216-2:13/ EN 10216-1:13/ASTM A106:19/ ISO 3183:19		Dimensiune / Dimensions: 60.3 x 4 x 12 000+100/-0 mm Otel / Steel: S235JRH/ P235GH TC1/ P265GH TC1/ P235TR2/Gr. B/ L245 PSL1		
Description: Hot rolled seamless steel pipes, with bevelled ends, unprotected; marking by painting at one end: manufacturer's mark, standard, steel grade, dimension, 5.55 Kg/m, 2", TEST PRESSURE 17.2 MPa, SMLS, heat no., lot, LENGTH(m), mill inspector no. 5, technical control sign, CE; marking at both ends: manufacturer's mark, heat no., dimension, mill inspector no. 5, technical control sign,				
Nr. Sarja / Heat No. : 55718				
Cantitatea livrata/ Quantity delivered	Bucati/ Pcs.	Lungime/ Length - m	Greutate / Weight- Kg	
	25	300.0	1669	

Compozitia chimica pe otel lichid / Ladle Chemical Analysis [%]

Heat no.	C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	N	V	B	CE
55718	0.12	0.51	.003	.010	0.20	0.07	0.04	0.01	0.20	.022	.001	.001	.009	.001	.0002	.233

Cr+Cu+Mo+Ni=0.32

Nb+V=0.002

Nb+V+Ti=0.003

Compozitia chimica pe produs / Product Chemical Analysis [%]

Heat no.	C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	V	B
55718	0.12	0.51	.003	.012	0.21	0.06	0.04	0.01	0.20	.026	.001	.002	.001	.0002
55718	0.11	0.51	.001	.010	0.21	0.06	0.04	0.01	0.20	.025	.001	.002	.001	.0003

Caracteristici mecanice / Mechanical Properties

TENSILE TEST (1. EN ISO 6892-1/ 2. ASTM A370) - at room temperature- Tip epruveta / Test Specimen // Fasie - longitudinal / Strip-longitudinal		Rp0.2 N/mm ²	Rt0.5 N/mm ²	Rm N/mm ²	A %
Dimensiune / Dimension (mm) : 1. 15.15 x 4.10 / 2. 19.35 x 4.05		1. 360	-	467	35
Sectiune / Section (mm ²) : 1. 62.11 / 2. 78.36					
Lungime / Length - (Lo) (mm) : 1. 50 / 2. 50.8		2. -	360	463	35
Test largire pe dom Drift expanding test (EN ISO 8493)	Test aplatizare Flattening test (EN ISO 8492)	Test Charpy - crestatura V Charpy V - Notch (EN ISO 148-1) KV/Longitudinal 2.5 x 10 [mm]		Test Charpy - crestatura V Charpy V - Notch (EN ISO 148-1) KVc/Longitudinal 10 x 10 [mm]	
OK	OK	23 (22; 24; 22) J (-10 ⁰ C)		91 (88; 96; 88) J (-10 ⁰ C)	
Hydraulic test pressure (ASTM A530): 17.2 MPa for 5 sec: OK Heat treatment: normalized during hot rolling process, temperature between 880°C - 940°C and cooled in still air Grain size ASTM E 112: 9.0		Melting process: electric arc furnace, fully killed Hardness HRB: 75-76 Hardness HRC max 22 (acc to NACE MR0175/ISO 15156) Bending test (ASTM A106 point 11): OK			

Hot yield at 300°C: 246 MPa (strip longitudinal 6.80 x 4.1 = 27.88 mm²)

Visual inspection and dimensional check : OK

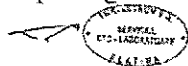
Fabrica producatoare de tevi este certificate in accord cu ISO 9001:2015, ISO 14001:2015 si ISO 45001:2018

The manufacturer of pipes is certified in acc. with ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018

" NO WELD REPAIR ON HEREBY CERTIFIED TUBES "

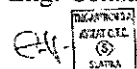
QC & LABORATORIES CHIEF

Dipl. Eng. Silviu Barbulescu



MILL INSPECTOR

Eng. Constantin Lupu



This inspection certificate is electronic.

The forgery of this certificate concludes to responsibility mentioned on Romanian Penal Code (art. 290-292).

THIS IS FOR CERTIFY THAT THE MATERIAL HEREIN DESCRIBED HAS BEEN MANUFACTURED WITH THE ORDERED SPECIFICATION AND THAT INFORMATION IS CORRECT. THEY MEET THE SPECIFICATION'S REQUIREMENTS AND ARE RECORDS IN OUR COMPANY DOCUMENTS.

 0036- CPR-M-008-2007 TMK-ARTROM S.A. Draganesti Street, No. 30, 230119, SLATINA, OLT, ROMANIA 21 No. 2-4E / CPR 15-10-19 EN 10210-1:2006 S235JRH / L0039 intended to be used in metal structures or in composite metal and concrete structures	
Tolerances: Elongation: Tensile strength: Yield strength: Impact strength: Weldability: Durability: Dangerous substance: No performance determined	expressed as indicated in the DoP



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EUID: ROONRCJ28/9/1991; J28/9/31.01.1991

VAT No. RO 1510210/1992

Subscribed and Paid Share Capital: 291.587.538,34 lei

INSPECTION CERTIFICATE - EN 10204: 2004 / 3.1

No : I 4376 Date: 31.05.2022	Sigla fabricii: Manufacturer's mark:		Comanda client nr.: 4501890774 Customer Order No. : 4501890774	PL: 0783
Specificatii/Specification: EN 10216-2:13/ ASTM A106:19/ISO 3183:19/ PED 2014/68/EU+ AD 2000W4/ Spec. TMK rev. 9/15.10.2020		Dimensiune /Dimensions: 76.1 x 4 x 12 000+150/-0 mm Otel / Steel: P235GH TC1/P265GH TC1 / Gr. B/L245 PSL1		
Descriere: Tevi din otel fara sudura laminate la cald, neprotejate, sanfrenate la ambele capete: marcare prin sablonare la un capat: sigla fabricii, standard, otel, dimensiune, 7.11 Kg/m, TEST PRESSURE 17.2 MPa, SMLS, nr. sarja, lot, LENGTH(m), inspector CTC nr. 5; marcare prin poansonare la ambele capete: sigla fabricii, otel, S, nr. sarja, Description: Hot rolled seamless steel pipes, unprotected, with bevelled ends; marking by painting at one end: manufacturer's mark, standard, steel grade, dimension, 7.11 Kg/m, TEST PRESSURE 17.2 MPa, SMLS, heat no., lot, LENGTH(m), mill inspector no. 5, technical control sign; marking at both ends: manufacturer's mark, steel grade, S, heat no.,				
Nr. Sarja / Heat No. : R58868		Otel produs si laminat in Romania/Steel melt and rolled in ROMANIA		
Cantitatea livrata/ Quantity delivered	Bucati / Pcs.	Lungime/Length - m	Greutate / Weight- Kg	
	27	324.0	2306	

Compozitia chimica pe otel lichid / Ladle Chemical Analysis [%]

Heat no.	C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	V	B
R58868	0.12	0.52	0.002	0.010	0.23	0.10	0.06	0.02	0.25	0.020	0.001	0.001	0.001	.0006

Cr+Cu+Mo+Ni=0.43

Nb+V=0.002

Nb+V+Ti=0.003

Compozitia chimica pe produs / Product Chemical Analysis [%]

Heat no.	C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	V	B
R58868	0.13	0.53	0.001	0.013	0.23	0.10	0.06	0.02	0.27	0.022	0.002	0.001	0.001	.0006
R58868	0.13	0.54	0.002	0.012	0.22	0.10	0.06	0.02	0.27	0.022	0.001	0.001	0.001	.0006

Caracteristici mecanice / Mechanical Properties

TENSILE TEST (1. EN ISO 6892-1/ 2. ASTM A370) - at room temperature- Tip epruveta / Test Specimen // Fasie – longitudinal / Strip-longitudinal			Rp0.2 N/mm²	Rt0.5 N/mm²	Rm N/mm²	A %
Dimensiune / Dimension (mm) : 1. 15.25 x 4.25 / 2. 19.30 x 4.25			1. 358	-	465	37
Sectiune / Section (mm²) : 1. 65.3 / 2. 83.01						
Lungime / Length - (Lo) (mm) : 1. 45 / 2. 50.8			2. -	356	470	38
Test largire pe dorn Drift expanding test (EN ISO 8493)	Test aplatizare Flattening test (EN ISO 8492)	Test Charpy - crestatura V Charpy V – Notch (EN ISO 148-1) KV/Longitudinal 2.5 x 10 [mm]	Test Charpy - crestatura V Charpy V – Notch (EN ISO 148-1) KVc/Longitudinal 10 x 10 [mm]			
OK	OK	31 (27; 31; 34) J (-10 ⁰ C)	123 (108; 124; 136) J (-10 ⁰ C)			
Hydraulic test pressure (ASTM A530): 17.2 MPa for 5 sec: OK			Hardness HRB: 76-77			
Heat treatment: normalized during hot rolling process			Hardness HRC max 22 (acc to NACE MR0175/ISO 15156)			
Melting process: electric arc furnace, fully killed			NACE MR0103/ISO 17945			
			Grain size ASTM E 112: 9.0			

Hot yield at 300°C: 287 MPa(strip longitudinal 5.25 x 4.25 = 22.33 mm²);Hot yield at 343°C: 270 MPa(strip longitudinal 5.35 x 4.10 = 21.96 mm²);Hot yield at 538°C: 185 MPa(strip longitudinal 5.65 x 4.20 = 23.75 mm²)

Inspectia vizuala si dimensionala: OK / Visual inspection and dimensional check : OK

Fabrica producatoare de tevi este certificata conform ISO 9001:2015, ISO 14001:2015 si ISO 45001:2018

The manufacturer of pipes is certified in acc. with ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018

The material "not contain intentional additions of elements such as lead, selenium, or sulphur to improve machinability"

"TEVILE CERTIFICATE NU AU FOST REMANIMATE PRIN SUDURA "

"NO WELD REPAIR ON HEREBY CERTIFIED TUBES "

Chief of QC & Testing of the Metallurgical Tubes Products

MILL INSPECTOR

Dipl. Eng. Silviu Barbulescu

Eng. Constantin Lupu

"Issued in agreement with TÜV SÜD Industrie Service GmbH (02/98)"

"QS approved acc. to PED, Annex I, Para. 4.3 by Notified Body 0036"

"(Certification no. DGR-0036-QS-W 62/2002/MUC)"

This MTC is digitally signed and sealed by TMK-ARTROM S.A. IT system. The document is valid without handwritten signatures.

To check its authenticity and integrity, please scan the QR code to download the original electronic document from our site. If you already received an electronic copy from your supplier, please make sure that the file is digitally signed by TMK-ARTROM S.A.

Falsification of this document is punishable under the legal provisions and entitles us to claim damages

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EUID: ROONRC.J28/9/1991; J28/9/31.01.1991

VAT No. RO 1510210/1992

Subscribed and Paid Share Capital: 291.587.538,34 lei

INSPECTION CERTIFICATE - EN 10204: 2004 / 3.1

No: I 4341 Date: 31.05.2022	Manufacturer's mark:	Customer Order No.: 161	PL: 0790
CUSTOMER: NIMFA-COM SRL			
Specification: PED 2014/68/EU + EN10210-1:06/ EN10210-2:19/ EN 10216-2:13/ EN 10216-1:13		Dimensions: 88.9 x 4 x 6 000+100/-0 mm Steel: S355J2H / P265GH TC1 / P265TR2	
Description: Hot rolled seamless steel pipes with bevelled ends; unprotected; marking by painting at one end: manufacturer's mark, standard, steel grade, heat no, LOT, mill inspector no. 5, technical control sign			
Heat No.: R58462		Steel melt and rolled in ROMANIA	
Quantity delivered	Pcs.	Length - m	Weight- Kg
	74	444.00	3850

Ladle Chemical Analysis [%]

C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	V	CE
0.19	1.22	0.003	0.010	0.19	0.09	0.06	0.03	0.18	0.025	0.001	0.001	0.002	0.430

Mechanical Properties

TENSILE TEST (EN ISO 6892-1) - at room temperature- Test Specimen / Strip-longitudinal			Rp0.2 N/mm ²	Rm N/mm ²	A %
Dimension (mm): 15.25 x 4.25			411	537	31
Section (mm ²): 65.16					
Length - (Lo) (mm): 45					
Drift expanding test (EN ISO 8493)	Flattening test (EN ISO 8492)	Charpy V - Notch (EN ISO 148-1)	Ring tensile test (EN ISO 8496)		
OK	OK	-	-		
Heat treatment: normalized during hot rolling process with temperature between 880-940°C Hydraulic test pressure - 70 bar for 5 sec: OK			Hardness HRB: 84-85 Hardness HRC max 22 (acc to NACE MR0175/ISO 15156) NACE MR0103/ISO 17945 Grain size ASTM E 112: 9.0		

Visual inspection and dimensional check: OK

The manufacturer of pipes is certified in acc. with ISO 9001: 2015, ISO 14001:2015 and ISO 45001:2018

NO WELD REPAIR ON HEREBY CERTIFIED TUBES

The material "not contain intentional additions of elements such as lead, selenium, or sulphur to improve machinability"

Chief of QC & Testing of the Metallurgical Tubes Products

Dipl. Eng. Silviu Barbulescu

MILL INSPECTOR

Eng. Constantin Lupu

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 0036- CPR-M-008-2007 TMK-ARTROM S.A. Draganesti Street, No.30, 230119, SLATINA, OLT, ROMANIA 22 No. 6-5E / CPR 18-05-22 EN 10210-1:2006 S355J2H / 1.0576 intended to be used in metal structures or in composite metal and concrete structures	
Tolerances: Elongation: Tensile strength: Yield strength: Impact strength: Weldability: Durability: Dangerous substance: No performance determined	expressed as indicated in the DoP

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VAT No. RO 1510210/1992

Subscribed and Paid Share Capital: 291.587.538,34 lei

INSPECTION CERTIFICATE - EN 10204: 2004 / 3.1

No : I 1092 Date: 02.10.2022	Manufacturer's mark:	Customer Order No. : 156	PL: 0237
CUSTOMER- NIMFA-COM SRL			
Specification: EN10210-1:06/ EN10210-2:19/ EN 10216-2:13/ EN 10216-3:13/ ISO 3183:19 /ASTM A333:18		Dimensions: 108 x 4 x 12 000+100/-0 mm Steel: S355J2H/ P265GH TC1/ P355NL1 TC1/ L360 PSL1/Gr. 6	
Description: Hot rolled seamless steel pipes, unprotected; marking by painting at one end: manufacturer's mark, standard, steel grade, dimension, LENGTH(m), 20.5 MPa, SMLS, LT-45, heat no., lot, mill inspector no. 5, technical control sign,			
Heat No. : R57948			
Quantity delivered	Pcs.	Length - m	Weight- Kg
	14	168.0	1726

Ladle Chemical Analysis [%]

Heat no.	C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	V	B	CE
R57948	0.18	1.20	.001	.012	0.23	0.08	0.08	0.02	0.17	.029	.001	.001	.002	.0005	.437

Nb+V=0.003

Nb+Ti+V=0.004

N=0.008

Product Chemical Analysis [%]

Heat no.	C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	V	B
R57948	0.18	1.20	0.001	0.015	0.22	0.08	0.07	0.02	0.17	0.027	0.003	0.002	0.002	.0005
R57948	0.18	1.20	0.002	0.014	0.22	0.08	0.07	0.02	0.17	0.026	0.002	0.002	0.002	.0005

Mechanical Properties

TENSILE TEST (1. EN ISO 6892-1 / 2. ASTM A370) – at room temperature- Test Specimen / Strip-longitudinal			Rp0,2 N/mm²	Rt0,5 N/mm²	Rm N/mm²	A %
Dimension (mm) : 1. 10.60 x 4.05 / 2.1. 19.60 x 4.00 / 2.2. 19.30 x 4.00			1. 419	-	536	32
Section (mm²) : 1. 42.93 / 2.1. 78.40 / 2.2. 77.20			2.1. -	424	550	31
Length - (Lo) (mm) : 1. 45 / 2.1. 50.8 / 2.2. 50.8			2.2. -	422	537	32
Drift expanding test (EN ISO 8493)	Flattening test (EN ISO 8492)	Charpy V – Notch (ASTM A370) KV/Longitudinal 3.3 x 10 [mm]	Charpy V – Notch (ASTM A370) KVc/Longitudinal 10 x 10 [mm]			
OK	OK	28 (27; 31; 25) J (-56 ⁰ C)	83 (81; 93; 75) J (-56 ⁰ C)			
Hydraulic test pressure 20.5 MPa for 5 sec: OK Flattening test (ASTM A999): OK			Melting process: electric arc furnace, fully killed Heat treatment: normalized			

Visual inspection and dimensional check : OK

The manufacturer of pipes is certified in acc. with ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018

THE PRODUCTS DELIVERED ARE CONTROLLED ON RADIOACTIVITY
RESPECTIVELY ARE FREE FROM
ADDITIONAL IONIC RADIATION

" NO WELD REPAIR ON HEREBY CERTIFIED TUBES "

QC & LABORATORIES CHIEF

Dipl. Eng. Silviu Barbulescu

MILL INSPECTOR

Eng. Constantin Lupu

This MTC is digitally signed and sealed by TMK-ARTROM S.A. IT system. The document is valid without handwritten signatures.



0036- CPR-M-008-2007

TMK-ARTROM S.A. Draganesti Street, No.30, 230119,
SLATINA, OLT, ROMANIA

22

No. 6-4E / CPR 15-10-19

EN 10210-1:2006

S355J2H / 1.0576

intended to be used in metal structures or in composite
metal and concrete structures

Tolerances:

Elongation:

Tensile strength:

Yield strength:

Impact strength:

Weldability:

Durability:

Dangerous substance: No performance determined

expressed as indicated in
the DoPTHIS IS FOR CERTIFY THAT THE MATERIAL HEREIN DESCRIBED HAS BEEN MANUFACTURED WITH THE ORDERED SPECIFICATION AND
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VAT No. RO 1510210/1992

Subscribed and Paid Share Capital: 291.587.538,34 lei

INSPECTION CERTIFICATE - EN 10204: 2004 / 3.1

No : I 7602 Date: 31.10.2020	Manufacturer's mark:	Customer Order No. : 099	PL:2433
CUSTOMER- NIMFA-COM SRL			
Specification: API 5L 46 th Ed./ EN 10216-2:13/ ASTM A106:19/ ISO 3183:19		Dimensions: 133.0 x 5.0 x 12 000 to 12 250 mm Steel: Gr. B PSL1/ P235GH TC1/ P265GH TC1/ Gr. B/L245 PSL1	
Description: Seamless steel pipes, unprotected; marking by painting at one end: TMK-ARTROM, standard, dimension, steel grade, LENGTH(m), SMLS, heat no., lot, mill inspector no. 5, technical control sign // standard, steel grade, TEST PRESSURE 17.2 MPa			
Heat No. : 54159			
Quantity delivered	Pcs. 51	Length - m 619.63	Weight- Kg 9782

Ladle Chemical Analysis [%]

Heat no.	C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	V	B
54159	0.12	0.52	0.003	0.015	0.21	0.09	0.09	0.02	0.23	0.026	0.001	0.001	0.002	.0002

Cr+Cu+Mo+Ni=0.43

Nb+V=0.003

Nb+V+Ti=0.004

Product Chemical Analysis [%]

Heat no.	C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	V	B
54159	0.12	0.52	0.003	0.015	0.22	0.08	0.10	0.02	0.22	0.027	0.001	0.001	0.002	.0002
54159	0.12	0.52	0.002	0.014	0.21	0.08	0.09	0.02	0.22	0.026	0.001	0.002	0.002	.0002

Mechanical Properties

TENSILE TEST (1. EN ISO 6892-1/ 2. ASTM A370) - at room temperature- Test Specimen / Strip-longitudinal			Rp0,2 N/mm²	Rt0,5 N/mm²	Rm N/mm²	A %
Dimension (mm) : 1. 10.35 x 5.05 / 2. 19.25 x 5.15			1. 332	-	456	35
Section (mm²) : 1. 75.24 / 2. 140.87						
Length - (Lo) (mm) : 1. 50 / 2. 50.8			2. -	331	448	36
Drift expanding test (EN ISO 8493)	Flattening test (EN ISO 8492)	Charpy V - Notch (EN ISO 148-1) KV/Longitudinal 5 x 10 [mm]	Ring tensile test (EN ISO 8496)			
OK	OK	72 (69; 73; 75) J (0° C)	-			
Hydraulic test pressure 17.2 MPa (172.4 bari) for 5 sec: OK Grain size ASTM E 112: 8.5			Heat treatment: normalized during hot rolling process, temperature between 880°C - 940°C and cooled in still air Melting process: electric arc furnace, fully killed			

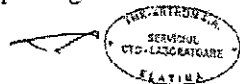
Visual inspection and dimensional check : OK

The manufacturer of pipes is certified in acc. with ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018

" NO WELD REPAIR ON HEREBY CERTIFIED TUBES "

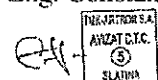
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MILL INSPECTOR

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Subscribed and Paid Share Capital: 291.587.538,34 lei

INSPECTION CERTIFICATE - EN 10204: 2004 / 3.1

No : I 6524 Date: 05.09.2017	Sigla fabricii: Manufacturer's mark:		Comanda client nr.: 16/2017 Customer Order No. : 16/2017	PL: JS_012116
Specificatii/Specification:API5L:13/ PED 2014/68/EU (Par. 4.3) +AD 2000W4/ ASTM A106:15/ASTM A53:12/ EN 10216-2:13/ ISO 3183:12		Dimensiune / Dimensions: 159.0 x 5.0 x 6 000+100/-0 mm Otel / Steel: Gr. B PSL1/ Gr.B/ P235GH TC1/P265GH TC1 / L245 PSL1		
Description: Hot rolled seamless steel pipes; marking by painting at one end: TMK-ARTROM, standard, dimension, steel grade, SMLS, heat no., lot, LENGTH(m), mill inspector no. 5 // standard, steel grade, 18.98 Kg/m, TEST PRESSURE 2500 PSI;				
Nr. Sarja / Heat No. : 47578				
Cantitatea livrata/ Quantity delivered	Bucati / Pcs.	Lungime/Length – m	Greutate / Weight– Kg	
	43	258.0	4902	

Compozitia chimica pe otel lichid / Ladle Chemical Analysis [%]

Heat no.	C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	V	B
47578	0.12	0.53	0.002	0.007	0.20	0.08	0.05	0.01	0.22	0.022	0.001	0.001	0.002	.0003

Cr+Cu+Mo+Ni= 0.36

Nb+V=0.003

Nb+V+Ti=0.004

Compozitia chimica pe otel produs / Product Chemical Analyse (%)

Heat no.	C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	V	B
47578	0.11	0.53	0.004	0.009	0.19	0.09	0.05	0.02	0.21	0.022	0.001	0.001	0.001	.0003
47578	0.12	0.54	0.003	0.009	0.20	0.09	0.05	0.02	0.21	0.022	0.002	0.002	0.002	.0003

Caracteristici mecanice / Mechanical Properties

INCERCAREA LA TRACTIUNE / TENSILE TEST (EN ISO 6892-1) - at room temperature-			Rp0,2 N/mm²	Rt0,5 N/mm²	Rm N/mm²	A %
Tip epruveta / Test Specimen // Tronson / Full section						
Dimensiune / Dimension (mm) : 26.9 x 5.05			389	391	471	38
Sectiune / Section (mm²) : 135.84						
Lungime / Length - (Lo) (mm) : 80						
Test largire dom Drift expanding test (EN ISO 8493)	Test aplatizare Flattening test (EN ISO 8492)	Test Charpy - crestatura V Charpy V – Notch (EN ISO 148-1) -	Test tractiune inel Ring tensile test (EN ISO 8496)			
OK	OK	-	-			
Hydraulic test pressure (ASTM A530): 2500 PSI for 5 sec: OK Melting process: electric arc furnace, fully killed Heat treatment: normalized during hot rolling process, temperature between 880°C - 940°C and cooled in still air Bending test (ASTM A106 point 11): OK			Grain size ASTM E 112: 9.0 Hardness HRB: 74-75-74-75 Hardness HRC max 22 (acc to NACE MR01.75/ISO 15156) NACE MR01.03/ISO 17495-1			

Inspectia vizuala si dimensionala: OK / Visual inspection and dimensional check : OK

The manufacturer of pipes is certified by LRQA in accordance with: ISO 9001:08 (certificate no. 6007159 issued by 2015-08-10, valid until 2018-08-10), ISO 14001:04 (certificate no.6007157 issued by 2015-08-16, valid until 2018-08-10), OHSAS 18001:07 (certificate no.6007158 issued by 2015-08-12, valid until 2018-08-10).

The material "not contain intentional additions of elements such as lead, selenium, or sulphur to improve machinability"

"TEVILE CERTIFICATE NU AU FOST REMANIMATE PRIN SUDURA "

" NO WELD REPAIR ON HEREBY CERTIFIED TUBES "

Sef serviciu CTC Laboratoare

QC & LABORATORIES CHIEF

Dipl. Eng. Silviu Barbulescu



INSPECTOR CTC

MILL INSPECTOR

Eng. Constantin Lupu



Ausgestellt im Einvernehmen mit dem TÜV SÜD (02/98)
Issued in agreement with TÜV SÜD (02/98)

THIS IS FOR CERTIFY THAT THE MATERIAL HEREIN DESCRIBED HAS BEEN MANUFACTURED WITH THE ORDERED SPECIFICATION AND THAT INFORMATION IS CORRECT, THEY MEET THE SPECIFICATION'S REQUIREMENTS AND ARE RECORDS IN F OUR COMPANY DOCUMENTS.