

**TMK-ARTROM S.A.**

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J 28/9/1991; VAT No. RO 1510210/1992

Subscribed and Paid Share Capital: 291.587.538,34 lei

INSPECTION CERTIFICATE - EN 10204: 2004 / 3.1

No : I 6942 Date: 03.09.2015	Sigla fabricii: Manufacturer's mark:		Comanda client nr.: 22 Customer Order No. : 22	PL: 2600
Specificatii / Specification: PED 97/23/EC+ EN10210-1&2:06/ EN 10216-3:13/ AD 2000W4+ EN 10216-2:13/ EN 10216-1:13/ ISO 3183:12		Dimensiune/Dimensions: 57.0 x 4 x 6 000+100/-0 mm Otel / Steel: S275J2H/ P275NL1 TC1/ P265GH TC1/ P265TR2/ L245 PSL1		
Description: Hot rolled seamless steel pipes; marking by painting at one end: manufacturer's mark, standard, steel grade, dimension, LENGTH(m), SMLS, heat no., lot, mill inspector no. 5, technical control sign				
Nr. Sarja / Heat No. : 10490				
Cantitatea livrata/ Quantity delivered	Bucati / Pcs.	Lungime/length - (m)	Greutate / Weight- Kg	
	44	266.0	1392	

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

Heat no.	C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	N	V	CE
10490	0.16	1.12	.001	.014	0.25	0.07	0.04	0.01	0.20	.026	.001	.024	.009	.020	0.379

Cr+Cu+Mo= 0.25

Nb+V=0.021

Nb+V+Ti=0.045

Compozitia chimica pe produs / Product Chemical Analyse (%)

Heat no.	C	Mn	S	P	Si	Ni	Cr	Mo	Cu	Al	Nb	Ti	V
10490	0.15	1.12	0.003	0.016	0.25	0.08	0.04	0.02	0.20	0.028	0.003	0.026	0.020
10490	0.16	1.12	0.003	0.016	0.24	0.08	0.05	0.02	0.21	0.027	0.002	0.026	0.019

Caracteristici mecanice / Mechanical Properties

INCERCAREA LA TRACTIUNE / TENSILE TEST (EN ISO 6892-1)			Rp0,2	Rt0,5	Rm	A
Tip epruveta / Test Specimen			N/mm ²	N/mm ²	N/mm ²	%
Fasie - longitudinal / Strip-longitudinal						
Dimensiune / Dimension (mm) : 10.80 x 4						
Sectiune / Section (mm ²) : 45.42			388	391	509	36
Lungime / Length - (Lo) (mm) : 40						
Test largire 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 tractiune inel Ring tensile test (EN ISO 8496)			
OK	OK	34 (36; 31; 34) J (-10 ⁰ C)	-			
Hydraulic test pressure (2470 PSI for) 5 sec: OK Heat treatment: normalized			Melting process: electric arc furnace, fully killed Hardness BHN: 153-156-153-156 Hardness HRC max 22 (acc to NACE MR01.75/ISO 15156)			

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).

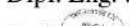
"TEVILE CERTIFICATE NU AU FOST REMANIMATE PRIN SUDURA "

" NO WELD REPAIR ON HEREBY CERTIFIED TUBES "

Sef serviciu CTC Laboratoare

QC & LABORATORIES CHIEF

Dipl. Eng. Silviu Barbulescu

INSPECTOR CTCMILL INSPECTOR

Eng. Constantin Lupu



Ausgestellt im Einvernehmen mit dem TÜV SÜD (02/98)

Issued in agreement with TÜV SÜD (02/98)



0036- CPR-M-008-2007

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No. 4-1 / CPR 04-06-14

EN 10210-1:2006

S275J2H / 1.0138

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

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 THE COMPANY DOCUMENTS.