



Manufacturer: ArcelorMittal Tubular Products Roman S.A. STEFAN CEL MARE STR, BL 15, SC. A, PARTER I ROMAN, NEAMT ROMANIA		MILL TEST CERTIFICATE according to EN 10204/3.1/2004				Page 1/4		 ArcelorMittal			
Buyer: ArcelorMittal Projects Americas LLC 1950 State Highway 249 Suite 650 Houston, USA		SEAMLESS STEEL PIPES				Total weight:				Total Length:	
						51.615 tons 113 792 lbs				387.93 meters 1 272.70 feet	
Buyer's reference PO NO.: 10116442/18065		Standard: API 5L ed.46-2018-PSL 1; ASTM A 106/A 106M-2019; ASME SA 106/SA 106M-2017; ASTM A 53/A 53M-2018; ASME SA 53/ SA53M/2017; ANSI/ NACE MR 0103-ISO 17945-2015; NACE MR 0175/ISO 15156-1&2-2015				05.08.2020		33		-	
Contract 50004599		Dimensions: 273.10 x 21.44 mm 10.750 x 0.844 inch		Schedule: 120		Length: 9.00 - 12.00 m		29.53 - 39.37 feet			
Item		Item Client		Hydro Test:	Bar	PSI	MPa	Time(sec)	Steel Grade: X42/B/C		
4		-			205	2970	20.5	5	-		

Chemical Analysis(%)

Heat	Bulletin No.	Product Req.	Max Min	C	Mn	Si	S	P	Cr	Ni	Cu	Mo	V	Nb	Ti	B
				0.28	1.06	-	0.030	0.030	0.40	0.40	0.40	0.15	-	-	-	0.0010
		Heat analysis		-	0.29	0.10	-	-	-	-	-	-	-	-	-	-
260843		Heat analysis		0.16	0.86	0.20	0.002	0.009	0.12	0.11	0.16	0.03	0.003	0.002	0.002	0.0001
458660		Heat analysis		0.19	1.05	0.28	0.002	0.011	0.14	0.10	0.17	0.03	0.004	0.001	0.002	0.0001
66906		Heat analysis		0.14	0.83	0.20	0.004	0.008	0.07	0.09	0.19	0.02	0.011	0.001	0.001	0.0003
260843	20-176	Product analysis		0.16	0.86	0.21	0.002	0.007	0.11	0.07	0.09	0.02	0.003	0.002	0.002	0.0001
260843	20-176	Product analysis		0.16	0.86	0.21	0.002	0.007	0.11	0.07	0.09	0.02	0.003	0.002	0.002	0.0001
458660	20-412	Product analysis		0.19	1.05	0.28	0.002	0.012	0.14	0.11	0.16	0.03	0.003	0.002	0.002	0.0001
458660	20-412	Product analysis		0.19	1.04	0.29	0.002	0.011	0.14	0.11	0.16	0.03	0.003	0.002	0.002	0.0001
66906	20-388	Product analysis		0.14	0.86	0.20	0.004	0.010	0.06	0.08	0.18	0.02	0.007	0.002	0.001	0.0001
66906	20-388	Product analysis		0.15	0.85	0.19	0.005	0.010	0.06	0.08	0.18	0.02	0.007	0.002	0.001	0.0001

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					B 19912			
					05.08.2020			
Buyer: ArcelorMittal Projects Americas LLC 19500 State Highway 249 Suite 650 Houston, USA	SEAMLESS STEEL PIPES				Total weight:	Total Length:	Pieces	Bundles
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Chemical Analysis(%)

Heat	Bulletin No.	Product Req.	Max Min	Nb + V	Nb + Ti + V	Cr + Mo + Ni + Cu + V
				0.060	0.150	1.000
				-	-	-
260843		Heat analysis		0.005	0.007	0.423
458660		Heat analysis		0.005	0.007	0.444
66906		Heat analysis		0.012	0.013	0.381
260843	20-176	Product analysis		0.005	0.007	0.293
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458660	20-412	Product analysis		0.005	0.007	0.443
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66906	20-388	Product analysis		0.009	0.010	0.347
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$$CE_{pcm} = C+Si/30+Mn/20+Cu/20+Ni/60+Cr/20+Mo/15+V/10+5B$$

$$CE_S = C+Mn/6$$


$$CE_{IIV} = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$$

Tensile Test

Heat	Orientation	Length		Width/Diameter		Thickness		Section		Mechanical test Bulletin No.	YS MPa	YS (PSI:1000)	UTS MPa	UTS (PSI:1000)	E %	YS/UTS max: -
		mm	inch	mm	inch	mm	inch	mm ²	inch ²							
260843	Longitudinal Round	50.8	2	12.50	0.492	0.00	0.000	122.7	4.831	20-1524	348.00	50.5	495.00	71.8	35.20	0.70
458660	Longitudinal Round	50.8	2	12.50	0.492	0.00	0.000	122.7	4.831	20-1443	373.00	54.1	512.00	74.3	34.60	0.73
66906	Longitudinal Round	50.8	2	12.50	0.492	0.00	0.000	122.7	4.831	20-2085	351.00	50.9	497.00	72.1	35.60	0.71

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4	-							

Hardness Test

Heat	Hardness Test Bulletin No.	HB max.-	HV 10 max.-	HV 10 max.-					HRC max.22
				OD	Midwall	ID	End A	End B	
260843	20-1298	-	-	-	-	-	-	-	<20
458660	20-1143	-	-	-	-	-	-	-	<20
66906	20-1762	-	-	-	-	-	-	-	<20

Technological/Microstructure Test


Heat	Flattening Test Bulletin No.	Flattening Test
260843	20-1502	OK
458660	20-1376	OK
66906	20-2471	OK

Heat

Heat	Pieces	Length (m)	Weight (kg)
260843	1	-	-
458660	31	-	-
66906	1	-	-

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Remarks PIPES IN COMPLIANCE WITH PED: 2014-68-EU/15.05.2014, ANNEX 1, SECTION 4.3.

Manufacturing process – hot rolling.

Hot finished, steel is fully killed and produced by electric furnace, country of origin is Romania and country of melt is Acciaierie Bertoli Safau S.p.A. Via Buttrio 28 - Frazione Cargnacco 33050 POZZUOLO DEL FRIULI (UD) - Italy & ArcelorMittal Hunedoara S A – Piata Iancu de Hunedoara, nr.1 – Hunedoara

Visual inspection and dimensional check without objection.

Hydrostatic test hold for 5 sec. no leakage noticed.

The products was manufactured, sampled, tested, marked and inspected in accordance with the Standards, the supplementary requirements, and any other requirements designated in the purchase order, and has been found to meet such requirements.

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