



Mill Test Certificate

Bri-Steel Manufacturing
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Product: Seamless Carbon Steel Pipe Product Heat Number: BSM-2836 Product Size: NPS 26 XS Production Date: Jul 12, 2016
 Production Method: Hot Expansion Product Heat Treatment: Normalizing Forming Certificate No.: MTR- 002904
 Product Standards: ASME B36.10M-2015, ASTM/ASME A333-2015 Grade 6 LT(M45C) A106-2014/SA106-2015 Grade B/C NDE, A53-2012/SA53-2015 Grade B Type S, NACE MR0175/ISO 15156-2:2009 MR0103/ISO 17495:2015
 Product Markings: NPS 26 XS 0.500 INCHWT SMLS 2016/07 NDE 900PSI
 HEAT BSM-2836 (PIPE # LENGTH MASS) 136.2lb/ft ASTM/ASME A/SA333 GR 6 LT(M45C) A/SA106 GR B/C A/SA53 GR B NACE MR0175/MR0103 MADE IN CANADA



Product: Details				Non-Destructive Testing											
Heat	Test Type	Product Size	Pieces	Length	Mass	Gelger	Res. Mag.	Visual	OD	UT	UT	ET	HydroTest	End	
BSM-2836	Heat	NPS 26 XS 0.500in. WT	5	DRL	136.2	<5	<20	Pass	Pass	Pass	Pass	Pass	Pass	Pass	
Chemical Analysis (wt%)															
Heat	Test Type	C	Mn	P	S	Si	Cr	Cu	Mo	NI	V	TI	Nb	B	
BSM-2836	Blast Furnace; EAF; Ladle Refining; Vacuum Degass; Fully Killed	0.16	1.14	0.014	0.002	0.26	0.05	0.01	0.01	0.02	0.050	0.001	0.001	0.0001	
	Product	0.15	1.10	0.016	0.002	0.28	0.06	0.01	0.01	0.02	0.053	0.001	0.001	0.0002	
		-	-	-	-	-	-	-	-	-	-	-	-	-	

Mechanical Properties									
Heat	Test Type	Microstructure	Hardness	Flattening Test	Tension Test	Yield (Rt0.5)	Tensile (Rm)	Y/T	Elongation (A)
BSM-2836	Heat	Ferrite & Pearlite	80 HRBW	Pass	2 in. GL Longitudinal: 1.5 in. x WT Longitudinal: 1.5 in. x WT	psi 46 000	psi 74 000	(Rt0.5/Rm) 0.62	% 42
				Pass		47 700	75 000	0.64	41

Heat	Test	Result	Impact Test	Temp	Impact Energy Min. (J)	Impact Energy Results (J)	Shear (%)	Lateral Expansion (mm)
BSM-2836	Standard	Pass	Sample Details	°C	(3 Tests) AVG	(3 Tests) AVG	AVG	(3 Tests) AVG
	ASTM A333	Pass	CVN Long 10 x 10 mm	-45	(14/14/14) 18	(90/69/45) 68	(30/20/10) 20	(1.48/0.59/0.50) 0.86

Additional Details:

✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected by Bri-Steel Manufacturing in accordance with ASTM/ASME A333-2015, A106-2014/SA106-2015, A53-2012/SA53-2015, and the purchase order requirements, and that the results meet the corresponding requirements. Bri-Steel Manufacturing is registered and certified to ISO-9001:2008 (APIQR-1584), API Q1, and PED 97/23/EC.

Mill Test Certificate approved by:

T. Lam July 19/2016

Tonya Lam, P. Tech (Eng.)
 Assistant QA Manager

- ✓ This pipe product meets the sour service requirements of NACE MR0175/ISO 15156-2:2009 Annex A2 for Region 3 Sour Service, and NACE MR0103/ISO 17495:2015 Section 13.1
- ✓ No weld repairs have been performed on this product.
- ✓ This product has not come into contact with mercury during the Bri-Steel Manufacturing processes.
- ✓ This certificate represents a quality control system that is compliant with EN 10204:2004 Type 3.1.