



# Mill Test Certificate

Bri-Steel Manufacturing  
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Product: Seamless Carbon Steel Pipe      Product Heat Number: BSM-2837      Product Size: NPS 26 XS  
 Production Method: Hot Expansion      Product Heat Treatment: Normalizing Forming      Certificate No.: MTR- 002905  
 Production Date: Jul 13, 2016

Product Standards: ASME B36.10M-2015, ASTM/ASME A333-2015 Grade 6 LT(M45C) A106-2014/SA106-2015 Grade B/C NDE, AS3-2012/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-2837 (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 lb/ft	Gelger	Res. Mag. Gauss	Visual Insp.	OD	UT WT	UT ASTM E213	ET ASTM E309	HydroTest 900PSI/ 5s	End Condition
BSM-2837	Heat	NPS 26 XS 0.500in. WT	1	DRL	136.2	<5	<20	Pass	Pass	Pass	N12.5 Pass	-	Pass	Plain End

Heat	Test Type	Steelmaking Method	Chemical Analysis (wt%)																
			C	Mn	P	S	Si	Cr	Cu	Mo	Ni	V	Ti	Nb	B	CE(IIW)	CE(IIW)Max	CE(CSA)	
BSM-2837	Blast Furnace; EAF; Ladle Refining; Vacuum Degass; Fully Killed		Heat	0.15	1.19	0.010	0.001	0.25	0.03	0.02	0.01	0.01	0.049	0.002	0.001	0.0003	0.37	-	0.35
			Product	0.16	1.21	0.009	0.004	0.27	0.04	0.02	0.01	0.01	0.053	0.002	0.001	0.0002	0.38	-	0.38

Mechanical Properties									
Heat	Test Type	Microstructure	Hardness	Flattening Test	Tension Test 2 in. GL	Yield (Rt0.5) psi	Tensile (Rm) psi	Y/T (Rt0.5/Rm)	Elongation (A) %
BSM-2837	Heat	Ferrite & Pearlite	80 HRBW	Pass	Longitudinal; 1.5 in. x WT	46 100	74 000	0.62	44

Heat	Test Standard	Result	Impact Test Sample Details	Temp °C	Impact Energy Min. (J)	Impact Energy Results (J)	Shear (%)	Lateral Expansion (mm)
BSM-2837	ASTM A333	Pass	CVN Long 10 x 10 mm	-45	(14/14/14) 18	(3 Tests) AVG (66/102/92) 87	(30/50/40) 40	(3 Tests) AVG (1.02/1.68/1.48) 1.39

- 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, AS3-2012/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.
  - ✓ 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.

Mill Test Certificate approved by:

*T. Lam*      *July 19/2016*

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