



Mill Test Certificate

Bri-Steel Manufacturing
 2125-64 Avenue, Edmonton, AB Canada T6P 1Z4
 Tel: 001 (780) 469-6603
 Fax: 001 (780) 469-6986
 www.bri-steel.com

Product: Seamless Carbon Steel Pipe Product Heat Number: BSM-2786 Production Date: Jun 02, 2016
 Production Method: Hot Expansion Product Heat Treatment: Normalizing Forming Certificate No.: MTR- 002850
 Product Standards: ASME B36.10M-2015, ASTM/ASME 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 30 XS 0.500 INCHWT SMLS 2016/06 NDE 800PSI
 HEAT BSM-2786 (PIPE # LENGTH MASS) 157.5lb/ft ASTM/ASME 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	Geiger μR/hr	Res. Mag. Gauss	Visual Insp.	OD	UT WT	UT ASTM E213	ET ASTM E309	HydroTest 800 PSI/ 5 S	End Condition
BSM-2786	Heat	NPS 30 XS 0.500in. WT	6	DRL	157.5	<5	<20	Pass	Pass	Pass	N12.5 Pass	-	Pass	35° Bevel

Heat	BSM-2786	Steelmaking Method Blast Furnace: EAF, Ladle Refining, Vacuum Degass, Fully Killed	Chemical Analysis (wt%)																																	
			Test Type		C		Mn		P		S		Si		Cr		Cu		Mo		Ni		V		Ti		Nb		B		CE(IW)		CE(IIW)Max		CE(CSA)	
			Heat	Product	0.20	0.19	0.87	0.85	0.015	0.014	0.010	0.011	0.22	0.22	0.03	0.03	0.07	0.08	0.01	0.01	0.04	0.03	0.001	0.001	0.001	0.001	0.001	0.001	0.0003	0.0003	0.36	0.35	0.37	0.35		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

Mechanical Properties									
Heat	Test Type	Microstructure	Hardness	Flattening Test	Tension Test 2 in. GL	Yield (Rt0.5) psi	Tensile (Rm) psi	V/T (Rt0.5/Rm)	Elongation (A) %
BSM-2786	Heat	Ferrite & Pearlite	74 HRBW	Pass	Longitudinal; 1.5 in. x WT	43 600	71 000	0.61	41

Heat	Test Standard	Result	Impact Test Sample Details	Temp °C	Impact Energy Min. (J)	Impact Energy (J)	Shear (%)	Lateral Expansion (mm)
BSM-2786	-	-	-	-	(3 Tests) AVG	(3 Tests) AVG	(3 Tests) AVG	(3 Tests) AVG

Additional Details:
 ✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected by Bri-Steel Manufacturing in accordance with ASTM/ASME 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.

✓ 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:

Ilana Sune / 08/2016

Kenton Dechant, P.Eng.
 Manager of Quality and R&D