




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-2788 Product Size: NPS 30 XS Production Date: Jun 06, 2016
 Production Method: Hot Expansion Product Heat Treatment: Normalizing Forming Certificate No.: MTR- 002855
 Product Standards: ASME B36.10M-2015, API 5L-45th Ed. GradeB PSL1, ASTM/ASME A106-2014/SA106-2015 Grade B NDE, A53-2012/SA53-2015 Grade B Type S, NACE MR0175/ISO 15156-2:2009
 MR0103/ISO 17495:2015
 Product Markings:  <API & L/C No.> API SPEC 5L NPS 30 XS 0.500 INCHWT GRB PSL1 SMLS 2016/06 NDE 800PSI
 HEAT BSM-2788 (PIPE # LENGTH MASS) 157.5lb/ft ASTM/ASME A/SA106 GR B 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 µR/hr	Res. Mag. Gauss	Visual Insp.	OD	UT WT	UT	ET	HydroTest	End Condition		
BSM-2788	Heat	NPS 30 XS 0.500in. WT	5	DRL	157.5	<5	<20	Pass	Pass	Pass	Pass	ASTM E213	ASTM E309	800 PSI/ 5 s	Pass	35° Bevel

Heat	BSM-2788	Steelmaking Method Blast Furnace; EAF; Ladle Refining; Vacuum Degas; Fully Killed (at PFCO China)	Chemical Analysis (wt%)																	
			Test Type		C	Mn	P	S	Si	Cr	Cu	Mo	Ni	V	Ti	Nb	B	CE(IIW)	CE(IIW)/Max	CE(CSA)
			Heat	Product	0.20	0.87	0.015	0.010	0.22	0.03	0.07	0.01	0.04	0.001	0.001	0.001	0.001	0.0003	0.36	-
			0.19	0.88	0.014	0.011	0.22	0.03	0.08	0.01	0.03	0.003	0.001	0.001	0.0003	0.35	-	0.36		
			0.19	0.86	0.014	0.011	0.22	0.03	0.08	0.01	0.03	0.003	0.001	0.001	0.0003	0.35	-	0.35		

Mechanical Properties									
Heat	Test Type	Microstructure	Hardness	Flattening Test	Tension Test 2 in. GI	Yield (Rt0.5) psi	Tensile (Rm) psi	V/T (Rt0.5/Rm)	Elongation (A) %
BSM-2788	Heat	Ferrite & Pearlite	74 HRBW	Pass	Longitudinal, 1.5 in. x WT	40 500	68 500	0.59	41

Heat	Test Type	Test Standard	Result	Impact Test Sample Details	Temp °C	Impact Energy Min. (J) (3 Tests) AVG	Impact Energy (J) (3 Tests) AVG	Shear (%) (3 Tests) AVG	Lateral Expansion (mm) (3 Tests) AVG
BSM-2788	-	-	-	-	-	-	-	-	-

Additional Details:
 ✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected by Bri-Steel Manufacturing in accordance with API 5L-45th Ed., 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:

Tonya Lam / 09/2016

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