



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

Mill Test Certificate

Product: Seamless Carbon Steel Pipe Product Heat Number: BSM-3188 Product Size: NPS 30 STD Production Date: Jul 10, 2017
Production Method: Hot Expansion Product Heat Treatment: Normalizing Forming Certificate No.: MTR- 003404

Product Standards: ASME B36.10M-2015, ASTM/ASME A333-2016/SA333-2015 Grade 6 LT(M45C) A106-2014/SA106-2015 Grade B/C NDE, A53-2012/SA53-2015 Grade B Type S, NACE MR0175/ISO 15156-2:2015 MR0103/ISO 17495:2015

Product Markings
NPS 30 STD 0.375 INCHWT SMLS 2017/07 NDE 600PSI
HEAT BSM-3188 (PIPE # LENGTH MASS) 118.82lb/ft ASTM/ASME A/SA333 GR 6 LT(M45C) A/SA106 GR B/C A/SA53 GR B NACE MR0175/MRO103 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) ASTM E114	UT ASTM E213	ET ASTM E309	HydroTest 600PSI/ 5 s	End Condition
BSM-3188	Heat	NPS 30 STD 0.375in. WT	1	DRL	118.82	<5	<10	Pass	Pass	N12.5 Pass	-	-	Pass	35° Bevel

Chemical Analysis (wt%)

Heat	Steelmaking Method	Test Type	C	Mn	P	S	Si	Cr	Cu	Mo	Ni	V	Ti	Nb	B	CE(IIW)	CE(IIW)Max	CE(CSA)
BSM-3188	Blast Furnace; EAF; Ladle Refining; Vacuum Degas; Fully Killed	Heat	0.17	1.10	0.009	0.003	0.31	0.05	0.03	0.01	0.01	0.061	0.003	0.004	0.0005	0.38	-	0.38
		Product	0.19	1.16	0.011	0.008	0.33	0.05	0.03	0.01	0.01	0.060	0.002	0.001	0.0004	0.41	-	0.42
			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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-3188	Heat	Ferrite & Pearlite	81 HRBW	Pass	Longitudinal; 1.5 in. x WT	51 000	76 000	0.67	37

Heat	Test Standard	Result	Impact Test Sample Details	Temp °C	Impact Energy Min. (J) (3 Tests) AVG	Impact Energy Results (J) (3 Tests) AVG	Shear (%) (3 Tests) AVG	Lateral Expansion (mm) (3 Tests) AVG
BSM-3188	ASTM A333	Pass	CVN Long 8STR 10x7.5mm	-48	(11/11/11) 14	(56/38/38) 44	(20/20/20) 20	(1.17/0.88/0.83) 0.96

Additional Details:

✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected by Bri-Steel Manufacturing in accordance with ASTM/ASME A333-2016/SA333-2015, 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 9001:2015 (APIQR-1584), API Q1, and PED 2014/68/EU.

✓ This pipe product meets the **SOUR SERVICE** requirements of ANSI/NACE MR0175/ISO 15156-2A:2015 (Annex A2 for Region 3 Sour Service), and ANSI/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:

Tilman Suly 12/2017

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