



Mill Test Certificate

Bri-Steel Manufacturing Inc.
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-2000

Product Size: 30STD

Production Date: Sep 03, 2014

Production Method: Hot Expansion

Product Heat Treatment: As-rolled

Certificate No.: MTR- 001313

Product Standards: ASME B36.10-2004, ASTM/ASME A/SA333-2013 Grade 6 LT(M45C) A/SA106-2013 Grade B/C NDE, A/SA53-2012 Grade B Type S, NACE MR0175-2009 MR0103-2010

Product Markings



NPS 30 STD 0.375 INCHWT SMLS 2014/09 NDE 1180PSI
HEAT BSM-2000 (PIPE # LENGTH MASS) 118.6lb/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	Geiger μ R/hr	Res. Mag. Gauss	Visual Insp.	OD	UT WT	UT ASTM E213	ET ASTM	HydroTest 1180 PSI/ 5 s	End Condition
BSM-2000	Heat	NPS 30 STD 0.375in. WT	13	DRL	118.6	<5	<15	Pass	Pass	Pass	Pass	Pass	Pass	32.5° 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(CSA)
BSM-2000	Blast Furnace; EAF; Ladle Refining; Vacuum Degass; Fully Killed	Heat	0.17	1.14	0.019	0.002	0.31	0.01	0.02	0.01	0.01	0.060				-	-
		Product	0.19	1.14	0.020	0.003	0.30	0.10	0.03	0.01	0.05	0.060	0.002	0.001	0.0003	0.42	0.42

Mechanical Properties										Yield (Rt0.5) psi			Tensile (Rm) psi		Y/T (Rt0.5/Rm)		Elongation (A) %	
Heat	Test Type	Microstructure	Hardness	Flattening Test	Tension Test 50mm GL	Longitudinal; 38.1 mm x WT			52,500		77,000		0.68		40			
BSM-2000	Heat	Ferrite & Pearlite	84 HRBW	Pass														

Heat	Test	Impact Test Sample Details	Temp °C	Impact Energy			% Shear			Lateral Expansion					
				J	J	J	AVG	%	%	%	AVG	mm	mm	mm	AVG
BSM-2000	ASTM A333	CVN Long 10 x 8 mm	-45	82.5	38.0	76.0	65.5	50	10	45	35	1.34	0.77	1.66	1.26

Additional Details:

✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected by Bri-Steel Manufacturing Inc. in accordance with ASTM/ASME A/SA333-2013 Grade 6 LT(M45C) A/SA106-2013 Grade B/C A/SA53-2012, and the purchase order requirements, and that the results meet the corresponding requirements.

Mill Test Certificate approved by:

✓ This pipe product meets the sour service requirements of NACE MR0175/ISO 15156-2:2009 Annex A2 for Region 3 Sour Service-2009 NACE MR0103-2010 Section 2.1

✓ 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.

Tonya Lam, C.E.T.
Assistant QA Manager

Product: Seamless Carbon Steel Pipe

Product Heat Number:

BSM-2000

Product Size: 30STD

Production Date: Sep 03, 2014