



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-2053 Product Size: 24STD Production Date: Sep 30, 2014
Production Method: Hot Expansion Product Heat Treatment: As-rolled Certificate No.: MTR- 001381

Product Standards: ASME B36.10-2004, ASTM/ASME A/SA106-2014 Grade B NDE, A/SA53-2012 Grade B Type S, NACE MR0175-2009 MR0103-2010

Product Markings



NPS 24 STD 0.375 INCHWT SMLS 2014/09 NDE 1180PSI
HEAT BSM-2053 (PIPE # LENGTH MASS) 94.62lb/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	Geiger µR/hr	Res. Mag. Gauss	Visual Insp.	OD	UT WT	UT ASTM E213	ET ASTM	HydroTest 1180 PSI/ 5 s	End Condition
Heat			1	DRL	94.62	<5	<10	Pass	Pass	Pass	Pass	Pass	Pass	32.5° Bevel
BSM-2053	Heat	NPS 24 STD 0.375in. WT	1	DRL	94.62	<5	<10	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-2053	Blast Furnace; EAF; Ladle Refining; Vacuum Degass; Fully Killed	Heat	0.17	0.87	0.009	0.004	0.23	0.05	0.07	0.02	0.05				0.0003	-	-
		Product	0.18	0.88	0.009	0.004	0.24	0.04	0.08	0.01	0.04	0.003	0.001	0.001	0.0003	0.35	0.35

Mechanical Properties									
Heat	Test Type	Microstructure	Hardness	Flattening Test	Tension Test 50mm GL	Yield (Rt0.5) psi	Tensile (Rm) psi	V/T (Rt0.5/Rm)	Elongation (A) %
BSM-2053	Heat	Ferrite & Pearlite	76 HRBW	Pass	Longitudinal; 38.1 mm x WT	45,100	68,000	0.66	44

Heat	Test Standard	Impact Test Sample Details	Temp °C	Impact Energy				% Shear				Lateral Expansion			
BSM-2053	-	-	-	J	J	J	AVG	%	%	%	AVG	mm	mm	mm	AVG
				-	-	-	-	-	-	-	-	-	-	-	-

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/SA106-2014 Grade B A/SA53-2012, and the purchase order requirements, and that the results meet the corresponding requirements. Bri-Steel Manufacturing is registered and certified to ISO-9001:2008 and API Q1.

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

Tonya Lam Oct 10/2014