



# Mill Test Certificate

Bri-Steel Manufacturing Inc.  
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Product: Seamless Carbon Steel Pipe      Product Heat Number: BSM-1330      Production Date: Oct 16, 2013  
 Production Method: Hot Expansion      Product Heat Treatment: As-rolled      Certificate No.: MTR- 000539

Product Standards: ASME B36.10-2004, ASTM/ASME A/SA106-2011 Grade B/C NDE, A/SA53-2012 Grade B Type S, NACE MR0175-2009 MR0103-2010

Product Markings: NPS 16 SCH 120 1.219 INCHWT SMLS 2013/10 NDE



HEAT BSM-1330 (PIPE # LENGTH MASS) 192.3lb/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	Geiger	Res. Mag.	Visual	OD	UT	UT	ET	HydroTest	End	
BSM-1330	Heat	NPS 16 SCH 120 1.219in. WT	4	DRL	192.3	<5	<10	Insp.	Pass	Pass	Pass	Pass	Pass	Plain End	

Heat	Steelmaking Method	Test Type	C	Mn	P	Chemical Analysis (wt%)											
						S	Si	Cr	Cu	Mo	Ni	V	Ti	Nb	B	CE(IIW)	CE(CSA)
BSM-1330	Blast Furnace: EAF; Ladle Refining: Vacuum Degass; Fully Killed	Heat	0.21	0.88	0.015	0.003	0.30	0.05	0.05	0.01	0.02	0.003	0.002	0.001	0.0003	-	
		Product	0.21	0.93	0.021	0.004	0.32	0.06	0.06	0.03	0.03	0.004	0.006	0.001	0.0002	0.39	

Mechanical Properties									
Heat	Test Type	Microstructure	Hardness	Flattening Test	Tension Test	Yield (Rt0.5)	Tensile (Rm)	Y/T	Elongation (A)
BSM-1330	Heat	Ferrite & Pearlite	76 HRBW	Pass	Longitudinal; 19.05 mm x WT	46,800 psi	70,000 psi	0.67	51

Heat	Test Standard	Impact Test Sample Details	Temp °C	Impact Energy				% Shear				Lateral Expansion				
				J	J	J	AVG	%	%	%	AVG	mm	mm	mm	AVG	
BSM-1330	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**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/SA106-2011 Grade B/C A/SA53-2012, and the purchase order requirements, and that the results meet the corresponding requirements.

✓ 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.

\* Note that this product was hydrotested to 1000 psi for 5 seconds.

Mill Test Certificate approved by:

2013 OCT 24

Paul Sowden, T.T.  
 Assistant QA Manager