



Mill Test Certificate

Bri-Steel Manufacturing Inc.
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Product: **Seamless Carbon Steel Pipe** Product Heat Number: **BSM-0020** Product Size: **NPS 18 STD** Production Date: **2011 Aug 30**

Production Method: **Hot Expansion** Product Heat Treatment: **As-rolled**

Product Standards: **ASTM/ASME A/SA106-2010 Grade B, A/SA53-2010 Grade B Type S, NACE MR0175-2003**

Product Markings: **.BRI-STEEL MFG NPS 18 STD ASTM/ASME A/SA106 GR B HEAT BSM-0020 NDE 900 PSI NACE MR0175-03 2011/09 MADE IN CANADA.**

Product Details				Non-Destructive Testing											
Heat	Test Type	NPS	SCH	Pieces	Length	Metric Tonnes	Geiger $\mu\text{R/hr}$	Res. Mag. Gauss	Visual Insp.	OD	UT WT	UT ASTM E213	ET ASTM E309	HydroTest 900 psi/5s	End Condition
BSM-0020	Heat	18	STD	4	DRL	5.64	<5	<20	Pass	Pass	Pass	---	Pass	Pass	37.5° Bevel

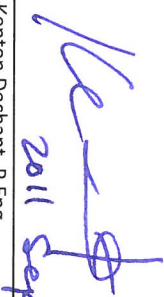
		Chemical Analysis (wt%)																
Heat	Test Type	Steelmaking Method		C	Mn	P	S	Si	Cr	Cu	Mo	Ni	V	Ti	Nb	B	CE (I/W)	CE (CSA)
		Blast Furnace; EAF; Ladle Refining; Vacuum Degas	0.18	0.86	0.013	0.008	0.23	0.03	0.11	0.01	0.03	0.003	0.001	0.001	0.0001	0.34	0.34	
BSM-0020	Heat																	

Mechanical Properties										
Heat	Test Type	Microstructure	Hardness HRB	Flattening Test	Tension Test		Yield (Rp0.5) psi	Yield (Rp0.2) psi	Tensile (Rm) psi	Elongation (A) %
					Transverse; 50mm GL; 38mm x WT	Pass				
BSM-0020	Heat	Ferrite & Pearlite	75	Pass						

Additional Details:

- ✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected in accordance with ASTM/ASME A/SA106-2010, A/SA53-2010 and the purchase order requirements, and that the results meet the corresponding requirements.
- ✓ This pipe product meet the sour service requirements of NACE MR0175/ISO 15156-2003 Annex A2 for Region 3 Sour Service, and NACE MR0103-2004 Para. 2.1.
- ✓ This certificate represents a quality control system that is compliant with EN 10204:2004 Type 3.1.

Mill Test Certificate approved by:


 2011 Sept 21
 Kenton Dechant, P. Eng.
 Manager of Quality and R&D