



## Mill Test Certificate

**Bri-Steel Manufacturing Inc.**  
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Product: **Seamless Carbon Steel Pipe** Product Heat Number: **BSM-0022** Product Size: **NPS 18 STD** Production Date: **2011 Aug 31**

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-0022 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 $\mu$ R/hr	Res. Mag. Gauss	Visual Insp.	OD	UT WT	UT ASTM E213	ET ASTM E309	HydroTest 900 psi/5s	End Condition
BSM-0022	Heat	18	STD	1	DRL	1.41	<5	<20	Pass	Pass	Pass	---	Pass	Pass	37.5° Bevel

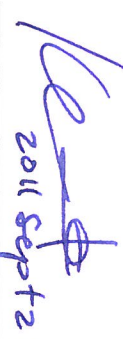
		Chemical Analysis (wt%)																
Heat	Test Type	Steelmaking Method		C	Mn	P	S	Si	Cr	Cu	Mo	Ni	V	Ti	Nb	B	CE (IIV)	CE (CSA)
		Blast Furnace; EAF; Ladle Refining; Vacuum Degass	0.21	0.86	0.014	0.010	0.22	0.03	0.11	0.02	0.03	0.003	0.001	0.001	0.0002	0.37	0.38	
BSM-0022	Heat																	

Mechanical Properties									
Heat	Test Type	Microstructure	Hardness HRB	Flattening Test	Tension Test Transverse; 50mm GL; 38mm x WT	Yield (Rt0.5) psi	Yield (Rp0.2) psi	Tensile (Rm) psi	Elongation (A) %
BSM-0022	Heat	Ferrite & Pearlite	81	Pass		56500	56500	78500	30

**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