



# 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.brichemsteel.com

Product: **Seamless Carbon Steel Pipe** Product Heat Number: **BSM-0002** Product Size: **NPS 18 STD** Production Date: **July 22 2011**

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-0002 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	Gelger $\mu R/hr$	Res. Mag. Gauss	Visual Insp.	OD	UT	UT	ET	HydroTest	End Condition
BSM-0002	Heat	18	STD	2	DRL	2.82	<5	<20	Pass	Pass	Pass	---	Pass	Pass	37.5° Bevel

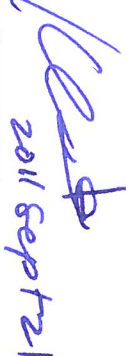
		Chemical Analysis (wt%)																
Heat	Test Type	Steelmaking Method		C	Mn	P	S	Si	Cr	Cu	Mo	Ni	V	Ti	Nb	B	CE (IIV)	CE (CSA)
		Blast Furnace; EAF; Ladle	Refining; Vacuum Degas															
BSM-0002	Heat			0.18	0.84	0.014	0.018	0.22	0.03	0.11	0.02	0.03	0.002	0.002	0.001	0.0001	0.34	0.34

Mechanical Properties											
Heat	Test Type	Microstructure	Hardness HRB	Flattening Test	Tension Test			Yield (Rp0.2) psi	Yield (Rp0.2) psi	Tensile (Rm) psi	Elongation (A) %
					Ferrite & Pearlite	74	Pass				
BSM-0002	Heat										

**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