



Mill Test Certificate

Bri-Steel Manufacturing Inc.
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Product: **Seamless Carbon Steel Pipe** Product Heat Number: **BSM-0016** Product Size: **NPS 18 STD** Production Date: **2011 Aug 26**
 Production Method: **Hot Expansion** Product Heat Treatment: **As-rolled**
 Product Standards: **ASTM/ASME A/SA106-2010 Grade B, NACE MR0175-2003**
 Product Markings: **.BRI-STEEL MFG NPS 18 STD ASTM/ASME A/SA106 GR B HEAT BSM-0016 NDE 900 PSI NACE MR0175-03 2011/09 MADE IN CANADA.**

Product Details						Non-Destructive Testing									
Heat	Test Type	NPS	SCH	Pieces	Length	Mass lb/ft	Geiger μ R/hr	Res. Mag. Gauss	Visual Insp.	OD	UT WT	UT ASTM E213	ET ASTM E309	HydroTest 900 psi/5s	End Condition
BSM-0016	Heat	18	STD	1	DRL	70.59	<5	<20	Pass	Pass	Pass	---	Pass	Pass	37.5° Bevel


Chemical Analysis (wt%)																
Heat	Test Type	Steelmaking Method														
BSM-0016	Heat	Blast Furnace; EAF; Ladle Refining; Vacuum Degass														
		C	Mn	P	S	Si	Cr	Cu	Mo	Ni	V	Ti	Nb	B	CE (IIW)	CE (CSA)
		0.21	0.86	0.015	0.013	0.23	0.04	0.11	0.02	0.03	0.002	0.001	0.004	0.0001	0.38	0.38

Mechanical Properties									
Heat	Test Type	Microstructure	Hardness HRB	Flattening Test	Tension Test	Yield (R _{0.5}) psi	Yield (R _{p0.2}) psi	Tensile (R _m) psi	Elongation (A) %
BSM-0016	Heat	Ferrite & Pearlite	77	Pass	Transverse; 50mm GL; 38mm x WT	50500	51500	76500	33

Additional Details:

- ✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected in accordance with ASTM/ASME A/SA106-2010 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:


 2012 July 9

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