



Mill Test Certificate

Bri-Steel Manufacturing Inc.
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Product: **Seamless Carbon Steel Pipe** Product Heat Number: **BSM-0033** Product Size: **NPS 24 0.750** Production Date: **2011 Sept 19**

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 24 0.750 ASTM/ASME A/SA106 GR B HEAT BSM-0033 (PIPE 3 LENGTH MASS) NDE 1300 PSI NACE MR0175-03 2011/09 MADE IN CANADA.**

Product Details				Non-Destructive Testing										
Heat	Test Type	NPS	SCH	Pieces	Length	Geiger	Res. Mag.	Visual	OD	UT	UT	ET	HydroTest	End
BSM-0033	Heat	24	0.750	1	27-30FT	µR/hr	Gauss	Insp.	Pass	WT	ASTM E213	ASTM E309	1300 psi/5s	Condition
						<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	CE
BSM-0033	Heat	Blast Furnace; EAF; Ladle Refining; Vacuum Degass		0.19	0.98	0.010	0.003	0.21	0.05	0.02	0.02	0.02	0.001	0.001	0.008	0.0001	0.37	0.37

Mechanical Properties										
Heat	Test Type	Microstructure	Hardness	Flattening Test	Tension Test		Yield (Rp0.5)	Yield (Rp0.2)	Tensile (Rm)	Elongation (A)
BSM-0033	Heat	Ferrite & Pearlite	HRB 75	Pass	Transverse; 50mm GL; 38mm x WT		psi 55500	psi 55500	psi 73500	% 48

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 22
 Kenton Dechant, P. Eng.
 Manager of Quality and R&D