



Mill Test Certificate

Bri-Steel Manufacturing Inc.
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Product: **Seamless Carbon Steel Pipe** Product Heat Number: **BSM-0079** Product Size: **NPS 24 STD** Production Date: **2011 Oct 31**

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

Product Standards: **ASTM/ASME A/SA106-2010 Grade B, A/SAS3-2010 Grade B Type S, NACE MR0175-2009**

Product Markings: **.BRI-STEEL MFG NPS 24 STD ASTM/ASME A/SA106 GR B A/SAS3 GR B HEAT BSM-0079 (PIPE # LENGTH MASS) NDE 650PSI NACE MR0175 2011/10 MADE IN CANADA.**

Product Details				Non-Destructive Testing											
Heat	Test Type	NPS	SCH	Pieces	Length	Metric Tonnes	Geiger μ R/hr	Res. Mag. Gauss	Visual Insp.	OD	UT	UT	ET	HydroTest	End Condition
BSM-0079	Heat	24	STD	1	DRL	2612 LB	<5	<20	Pass	Pass	Pass	ASTM E213	ASTM E309	650 psi/5s	37.5° Bevel


		Chemical Analysis (wt%)														
Heat	Test Type	Steelmaking Method														
		Blast Furnace; EAF; Ladle Refining; Vacuum Degas														
BSM-0079	Heat	C	Mn	P	S	Si	Cr	Cu	Mo	NI	V	Ti	Nb	B	CE (IIV)	CE (CSA)
		0.20	0.86	0.018	0.009	0.21	0.03	0.13	0.02	0.04	0.003	0.001	0.001	0.0002	0.36	0.37

Mechanical Properties										
Heat	Test Type	Microstructure	Hardness HRBW	Flattening Test	Tension Test		Elongation (A)			
					Transverse: 50mm GL; 38mm x WT	Yield (Rt0.5) psi		Yield (Rp0.2) psi	Tensile (Rm) psi	
BSM-0079	Heat	Ferrite & Pearlite	76	Pass			49,200	49,200	77,500	40

Additional Details:

- ✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected in accordance with ASTM/ASME A/SA106-2010, A/SAS3-2010 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 15156-2:2009 Annex A2 for Region 3 Sour Service, and NACE MR0103-2010 Section 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 Nov 16
 Kenton Dechant, P.Eng.
 Manager of Quality and R&D