



Mill Test Certificate

Bri-Steel Manufacturing Inc.
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Product: **Seamless Carbon Steel Pipe** Product Heat Number: **BSM-0012** Product Size: **NPS 24 STD** Production Date: **2011 Aug 12**

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 STD ASTM/ASME A/SA106 GR B A/SA53 GR B HEAT BSM-0012 NDE 650PSI NACE MR0175-03 2011/09 MADE IN CANADA.**

Product Details						Non-Destructive Testing									
Heat	Test Type	NPS	SCH	Pieces	Length	Mass	Geiger	Res. Mag.	Visual	OD	UT	UT	ET	HydroTest	End
BSM-0012	Heat	24	STD	1	Sample	95LB	µR/hr	Gauss	Insp.	Pass	Pass	ASTM E213	ASTM E309	650 psi/5s	Condition
							<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	CE
BSM-0012	Heat	Blast Furnace; EAF; Ladle Refining; Vacuum Degass		0.21	0.85	0.014	0.006	0.24	0.03	0.11	0.02	0.03	0.002	0.003	0.001	0.0001	0.37	0.38

Mechanical Properties									
Heat	Test Type	Microstructure	Hardness	Flattening Test	Tension Test	Yield (Rt0.5)	Yield (Rp0.2)	Tensile (Rm)	Elongation (A)
BSM-0012	Heat	Ferrite & Pearlite	HRB	Pass	Transverse; 50mm GL; 38mm x WT	psi	psi	psi	%
			77			47800	47800	77500	39

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 meets 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 29
 Kenton Dechant, P.Eng.
 Manager of Quality and R&D