



# Mill Test Certificate

**Bri-Steel Manufacturing Inc.**  
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Product: **Seamless Carbon Steel Pipe**      Product Heat Number: **BSM-0151**      Product Size: **NPS 30 STD**      Production Date: **2011 Dec 20**

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

Product Standards: **ASTM/ASME A/SA106-2010 Grade B/C, A/SA53-2010 Grade B Type S, NACE MR0175-2009**

Product Markings: **.BRI-STEEL MFG NPS 30 STD ASTM/ASME A/SA106 GR B/C A/SA53 GR B HEAT BSM-0151 (PIPE # LENGTH MASS) NDE 630PSI NACE MR0175 2011/11 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-0151	Heat	30	STD	1	DRL	118.6	µR/hr	Gauss	Insp.	Pass	Pass	Pass	Pass	630 psi/5s	Condition
							<5	<20	Pass	Pass	Pass	---	Pass	Pass	37.5° Bevel

		Steelmaking Method		Chemical Analysis (wt%)															
Heat	Test Type	Blast Furnace; EAF; Ladle Refining; Vacuum Degass		C	Mn	P	S	Si	Cr	Cu	Mo	Ni	V	Ti	Nb	B	CE	CE	
BSM-0151	Heat			0.21	0.90	0.015	0.005	0.24	0.04	0.06	0.01	0.03	0.005	0.002	0.001	0.0001	0.38	(IIW)	(CSA)

Mechanical Properties											
Heat	Test Type	Microstructure	Hardness	Flattening Test	Tension Test		Yield (Rt0.5)	Yield (Rp0.2)	Tensile (Rm)	Y/T	Elongation (A)
BSM-0151	Heat	Ferrite & Pearlite	HRBW	Pass	50mm GL; 38mm x WT	Transverse	psi	psi	psi	(Rt0.5/Rm)	%
			79			Longitudinal	43,200	44,400	74,500	0.58	45
							47,000	46,800	74,000	0.64	40

**Additional Details:**

- ✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected by Bri-Steel Manufacturing Inc. 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 15156-2:2009 Annex A2 for Region 3 Sour Service, and NACE MR0103-2010 Section 2.1.
- ✓ No weld repairs have been performed on this product. This product has no mercury contamination.
- ✓ This certificate represents a quality control system that is compliant with EN 10204:2004 Type 3.1.
- ✓ As per client requirements, diameter does not exceed 30.250 inches.

Mill Test Certificate approved by:

  
 2012 Feb 3

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