



## Mill Test Certificate

Bri-Steel Manufacturing Inc.  
 2125-64 Avenue, Edmonton, AB Canada T6P 1Z4  
 Tel: 001 (780) 469-6603  
 Fax: 001 (780) 469-6986  
 www.brihemsteel.com

Product: **Seamless Carbon Steel Pipe** Product Heat Number: **BSM-0097** Product Size: **NPS 24 STD** Production Date: **2011 Nov 10**

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 24 STD ASTM/ASME A/SA106 GR B/C A/SA53 GR B HEAT BSM-0097 (PIPE # LENGTH MASS) NDE 740PSI NACE MR0175 2011/11 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-0097	Heat	24	STD	1	DRL	μR/hr	Gauss	Insp.	Pass	Pass	ASTM E213	ASTM E309	740 psi/5s	Pass
					2886 LB	<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-0097	Heat	Blast Furnace; EAF; Ladle Refining; Vacuum Degass		0.22	0.89	0.009	0.007	0.22	0.04	0.08	0.01	0.02	0.003	0.001	0.001	0.0002	0.38	0.39

Mechanical Properties										
Heat	Test Type	Microstructure	Hardness HRBW	Flattening Test	Tension Test		Yield (Rt0.5)	Yield (Rp0.2)	Tensile (Rm)	Elongation (A)
BSM-0097	Heat	Ferrite & Pearlite	77	Pass	50mm GL; 38mm x WT	Transverse	44,700 psi	- psi	74,000 psi	42 %
					Longitudinal		47,500	-	74,000	44

**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 15156-2:2009 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:

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