



# Mill Test Certificate

**Bri-Steel Manufacturing Inc.**  
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Product: **Seamless Carbon Steel Pipe** Product Heat Number: **BSM-0956** Product Size: **NPS 24 TRUE40** Production Date: **June 3, 2013**

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

Product Standards: **ASME B36.10-2004, API 5L-44th Ed. Grade B PSL1, ASTM/ASME A/SA106-2011 Grade B NDE, A/SA53-2012 Grade B Type S, NACE MR0175-2009, MR0103-2010**

Product Markings: **BRI-STEEL MFG <API> 5L-0898 API 5L GR B PSL1 ASTM/ASME A/SA106 GR B A/SA53 GR B NPS 24 TRUE40 0.688 inchWT HEAT BSM-0956 (PIPE # LENGTH MASS) 171.2lb/ft NDE 1370 PSI SMLS NACE MR0175 2013/06 MADE IN CANADA.**

Product Details				Non-Destructive Testing										
Heat	Test Type	Product Size	Pieces	Length	Mass	Geiger	Res. Mag.	Visual	OD	UT	UT	ET	HydroTest	End
BSM-0956	Heat	NPS 24 TRUE40 0.688 In. WT	13	DRL	lb/ft	µR/hr	Gauss	Insp.	Pass	Pass	Pass	Pass	Pass	Plain End
					171.20	<5	<20	Pass	Pass	Pass	Pass	Pass	Pass	

Chemical Analysis (wt%)																
Heat	Steelmaking Method	C	Mn	P	S	Si	Cr	Cu	Mo	Ni	V	Ti	Nb	B	CE	CE
BSM-0956	Blast Furnace; EAF; Ladle Refining; Vacuum Degas; Fully Killed	0.20	0.89	0.008	0.009	0.25	0.03	0.08	0.02	0.04	-	-	-	0.0003	-	-
		Product	0.20	0.87	0.008	0.26	0.03	0.08	0.02	0.04	0.003	0.001	0.001	0.0001	0.36	0.37

Mechanical Properties										
Heat	Test Type	Microstructure	Hardness	Flattening Test	Tension Test		Yield (Rt0.5)	Tensile (Rm)	Y/T	Elongation (A)
					HRBW	50mm GL				
BSM-0956	Heat	Ferrite & Pearlite	75	Pass	Longitudinal; 38.1mm x WT	40,900	68,000	0.60	50	

**Additional Details:**

- ✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected by Bri-Steel Manufacturing Inc. in accordance with API 5L-44th Ed., ASTM/ASME A/SA106-2011, A/SA53-2012, 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 15156-2:2009 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 not come into contact with mercury during the Bri-Steel Manufacturing processes.
- ✓ This certificate represents a quality control system that is compliant with EN 10204:2004 Type 3.1.

Mill Test Certificate approved by:

*[Signature]*  
 2013 June 18

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