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

Mill Test Certificate

Product: **Seamless Carbon Steel Pipe** Product Heat Number: **BSM-0628** Product Size: **NPS 24 TRUE40** Production Date: **January 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/C 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/C A/SA53 GR B NPS 24 TRUE40 HEAT BSM-0628 (PIPE # LENGTH MASS) 171.2lb/ft NDE 1370 PSI SMLS NACE MR0175 2013/01 MADE IN CANADA.

Product Details							Non-Destructive Testing								
Heat	Test Type	NPS	Wall Thickness	Pieces	Length	Mass lb/ft	Geiger µR/hr	Res.Mag. Gauss	Visual Insp.	OD	UT WT	UT ASTM E213	ET ASTM E309	HydroTest 1370 psi/5s	End Condition
BSM-0628	Heat	24	TRUE40	10	DRL	171.20	<5	<20	Pass	Pass	Pass	Pass	Pass	Pass	Plain End

Chemical Analysis (wt%)																	
Heat	Steelmaking Method	Analysis	C	Mn	P	S	Si	Cr	Cu	Mo	Ni	V	Ti	Nb	B	CE (IIW)	CE (CSA)
BSM-0628	Blast Furnace; EAF; Ladle Refining; Vacuum Degas; Fully Killed	Heat	0.20	0.95	0.013	0.001	0.33	0.03	0.06	0.01	0.02	0.003	0.002	0.001	0.0002	-	-
		Product	0.20	0.93	0.020	0.004	0.28	0.04	0.08	0.01	0.03	0.003	0.002	0.001	0.0002	0.37	0.38

Mechanical Properties										
Heat	Test Type	Microstructure	Hardness HRBW	Flattening Test	Tension Test 50mm GL	Yield (Rt0.5) psi	Yield (Rp0.2) psi	Tensile (Rm) psi	Y/T (Rt0.5/Rm)	Elongation (A) %
BSM-0628	Heat	Ferrite & Pearlite	75	Pass	Transverse; 38.1mm x WT	43,500	41,900	70,500	0.62	51
					Longitudinal; 38.1mm x WT	49,300	48,800	69,500	0.71	54

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:

2013 Jan 18

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