



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

Mill Test Certificate

Product: **Seamless Carbon Steel Pipe** Product Heat Number: **BSM-0922** Product Size: **NPS 24 XS** Production Date: **May 22, 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 XS 0.5 inchWT HEAT BSM-0922 (PIPE # LENGTH MASS) 125.5lb/ft NDE 970 PSI SMIS NACE MR0175 2013/05 MADE IN CANADA.**

Product Details				Non-Destructive Testing											
Heat	Test Type	Product Size	Pieces	Length	Mass	Geiger	Res. Mag.	Visual	OD	WT	UT	UT	ET	HydroTest	End
BSM-0922	Heat	NPS 24 XS 0.5 In WT	14	DRL	125.50	µR/hr	Gauss	Insp.	Pass	Pass	Pass	Pass	Pass	970 psi/5s	Condition
						<5	<20	Pass	Pass	Pass	Pass	Pass	Pass	Pass	32.5° Bevel

Heat		Chemical Analysis (wt%)														
BSM-0922	Steelmaking Method	C	Mn	P	S	Si	Cr	Cu	Mo	Ni	V	Ti	Nb	B	CE	CE
	Blast Furnace: FAF; Ladle Refining: Vacuum Degass; Fully Killed	0.19	0.88	0.013	0.010	0.25	0.05	0.06	0.02	0.04	-	-	-	0.0003	-	-
		0.21	0.87	0.016	0.006	0.25	0.04	0.09	0.01	0.03	0.002	0.001	0.001	0.0001	0.37	0.38

Mechanical Properties									
Heat	Test Type	Microstructure	Hardness	Flattening Test	Tension Test	Yield (Rt0.5)	Tensile (Rm)	Y/T	Elongation (A)
BSM-0922	Heat	Ferrite & Pearlite	HRBW	Pass	50mm GL	psi	psi	(Rt0.5/Rm)	%
			75		Longitudinal, 38.1mm x WT	44,000	68,000	0.65	48

- 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 May 28

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

cert 67