



Bri-Steel Manufacturing Inc.
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Mill Test Certificate

Product: **Seamless Carbon Steel Pipe** Product Heat Number: **BSM-0797** Product Size: **NPS 16 STD** Production Date: **March 28, 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 16 STD 0.375 inchWT HEAT BSM-0797 (PIPE # LENGTH MASS) 62.58lb/ft NDE 1140 PSI SMLS NACE MR0175 2013/03 MADE IN CANADA.**

Product Details				Non-Destructive Testing										
Heat	Test Type	Product Size	Pieces	Length	Mass	Gelger	Res. Mag.	Visual	OD	UT	UT	ET	Hydro Test	End
BSM-0797	Heat	NPS 16 STD 0.375 in. WT	1	DRL	62.58	HR/hr	Gauss	Insp.	Pass	Pass	Pass	Pass	1140 psi/5s	37.5° Bevel

Chemical Analysis (wt%)																	
Heat	Steelmaking Method	Analysis	C	Mn	P	S	Si	Cr	Cu	Mo	Ni	V	Ti	Nb	B	CE	CE
BSM-0797	Blast Furnace; EAF; Ladle Refining; Vacuum Degass; Fully Killed	Heat	0.19	0.88	0.007	0.004	0.23	0.05	0.06	0.04	0.03	-	-	-	0.0004	-	-
		Product	0.21	0.89	0.008	0.006	0.24	0.05	0.06	0.04	0.03	0.001	0.002	0.001	0.0003	0.38	0.39

Mechanical Properties																	
Heat	Test Type	Microstructure	Hardness	Flattening Test	Tension Test		Yield (Rt0.5)	Yield (Rp0.2)	Tensile (Rm)	V/T	Elongation (A)	Lateral Expansion					
					HRBW	Pass						psi	psi	psi	mm	mm	mm
BSM-0797	Heat	Ferrite & Pearlite	75	Pass	Transverse: 38.1mm x WT Longitudinal: 38.1mm x WT		41,900	42,400	72,000	0.58	41						
BSM-0797	Test Standard	Impact Test Sample Details															
				Temp	Impact Energy		%	%	AVG	mm	mm	mm	mm	AVG			
				°C	J	J	-	-	-	-	-	-	-	-	-	-	-

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:

Kenton Dechant
 2013 Apr 2

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