



Bri-Steel Manufacturing Inc.
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Mill Test Certificate

Product: Seamless Carbon Steel Pipe

Product Heat Number:

BSM-0604

Product Size:

NPS 20 TRUE80

Production Date:

December 11, 2012

Production Method: Hot Expansion

Product Heat Treatment: As-rolled

Product Standards: ASME B36.10-2004, 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 ASTM/ASME A/SA106 GR B/C A/SA53 GR B NPS 20 TRUE80 HEAT BSM-0604 (PIPE # LENGTH MASS) 208.9lb/ft NDE SMIS NACE MR0175 2012/12 MADE IN CANADA.

Product Details						Non-Destructive Testing								
		Wall				Mass	Geiger	Res. Mag.	Visual	UT	UT	ET	HydroTest	End
Heat	Test Type	NPS	Thickness	Pieces	Length	lb/ft	μR/hr	Gauss	Insp.	OD	WT	ASTM E213	ASTM E309	Condition
BSM-0604	Heat	20	TRUE80	1	DRL	208.90	<5	<20	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-0604	Blast Furnace; EAF; Ladle Refining; Vacuum Degass; Fully Killed	Heat	0.20	0.90	0.017	0.011	0.23	0.06	0.08	0.02	0.06	-	-	-	0.0003	-	-
		Product	0.19	0.88	0.014	0.011	0.21	0.06	0.08	0.02	0.05	0.003	0.001	0.001	0.0001	0.36	0.37

Mechanical Properties												
Heat	Test Type	Microstructure	Hardness HRBW	Flattening Test	Tension Test		Yield (Rt0.5) psi	Yield (Rp0.2) psi	Tensile (Rm) psi	Y/T (Rt0.5/Rm)	Elongation (A) %	
					50mm GL							
BSM-0604	Heat	Ferrite & Pearlite	75	Pass	Transverse: 38.1mm x WT	Longitudinal: 38.1mm x WT	40,600	58,000	40,000	69,500	0.79	51

Additional Details:

- ✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected by Bri-Steel Manufacturing Inc. in accordance with 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.

*Note that this product was hydrotested to 1000 psi for 5 seconds.

Mill Test Certificate approved by:


2013 Jan 7

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