



# Mill Test Certificate

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Product: **Seamless Carbon Steel Pipe** Product Heat Number: **BSM-0005** Product Size: **NPS 20 XH** Production Date: **2011 August 8**

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

Product Standards: **ASTM/ASME A/SA106-2010 Grade B, NACE MR0175-2003**

Product Markings: **.BRI-STEEL MFG NPS 20 XH ASTM/ASME A/SA106 GR. B/C A/SA53 GR. B HEAT BSM-0005 (PIPE # LENGTH MASS) NDE 1100PSI NACE MR0175 2012/02 MADE IN CANADA.**

Product Details						Non-Destructive Testing									
Heat	Test Type	NPS	SCH	Pieces	Length	Mass lb/ft	Geiger $\mu$ R/hr	Res. Mag. Gauss	Visual Insp.	OD	UT WT	UT ASTM E213	ET ASTM E309 1100 psi/5s	HydroTest 1100 psi/5s	End Condition
BSM-0005	Heat	20	XH	3	DRL	104.1	<5	<20	Pass	Pass	Pass	---	Pass	Pass	37.5° Bevel


		Chemical Analysis (wt%)														
Heat	Test Type	Steelmaking Method														
		Blast Furnace; EAF; Ladle Refining; Vacuum Degass														
BSM-0005	Heat	C	Mn	P	S	Si	Cr	Cu	Mo	Ni	V	Ti	Nb	B	CE (IIW)	CE (CSA)
		0.18	0.86	0.019	0.006	0.22	0.033	0.13	0.012	0.038	0.004	0.001	0.001	0	0.34	0.35

Mechanical Properties									
Heat	Test Type	Microstructure	Hardness HRB	Flattening Test	Tension Test			Elongation (A) %	
					Transverse: 50mm GL; 38mm x WT	Yield (Rt0.5) psi	Yield (Rp0.2) psi		Tensile (Rm) psi
BSM-0005	Heat	Ferrite & Pearlite	75	Pass		53000	57500	75500	40

**Additional Details:**

- ✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected in accordance with ASTM/ASME A/SA106-2010 and the purchase order requirements, and that the results meet the corresponding requirements.
- ✓ This pipe product meet the sour service requirements of NACE MR0175/ISO 15156-2003 Annex A2 for Region 3 Sour Service, and NACE MR0103-2004 Para. 2.1.

Mill Test Certificate approved by:

  
 2012 Mar 13  
 Kenton Dechant, P.Eng.  
 Manager of Quality and R&D