



**Bri-Steel Manufacturing Inc.**  
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## Mill Test Certificate

Product: **Seamless Carbon Steel Pipe**    Product Heat Number: **BSM-1003**    Product Size: **NPS 36 STD**    Production Date: **June 18, 2013**  
 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 36 STD 0.375 inchWT HEAT BSM-1003 (PIPE # LENGTH MASS) 142.7lb/ft NDE 500 PSI SMLS NACE MR0175 2013/06 MADE IN CANADA.**

Product Details				Non-Destructive Testing									
Heat	Test Type	Product Size	Pieces	Length	Mass	Geiger	Res. Mag.	Visual	UT	UT	ET	Hydro Test	End
BSM-1003	Heat	NPS 36 STD 0.375 in.WT	2	DRL	142.70	<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	CE	CE
BSM-1003	Blast Furnace; EAF; Ladle Refining; Vacuum Degass; Fully Killed	Heat	0.20	0.87	0.011	0.012	0.22	0.03	0.01	0.02	0.04	-	-	-	0.0003	-
		Product	0.22	0.88	0.013	0.015	0.23	0.03	0.08	0.01	0.04	0.003	0.001	0.001	0.0003	0.38

Mechanical Properties										
Heat	Test Type	Microstructure	Hardness	Flattening Test	Tension Test		Yield (Rt0.5)	Tensile (Rm)	Y/T	Elongation (A)
					HRBW	50mm GL				
BSM-1003	Heat	Ferrite & Pearlite	75	Pass	Longitudinal; 38.1mm x WT	45,500	70,000	0.65	43	

Heat	Test Standard	Impact Test	Temp	Impact Energy			Lateral Expansion					
				J	J	%	mm	mm	mm			
BSM-1003	-	Sample Details	-	-	-	-	-	-	-	-	-	-

**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:

*Paul Sowden*

2013 OCT 11

Paul Sowden, T.T.  
 Assistant QA Manager