

## Mill Test Certificate

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Production Date: Jul 08, 2015

ThermoMechanical Formed Certificate No.: MTR- 001874

Product Size: NPS 36 STD

ASME B36.10-2004, ASTM/ASME A106-2014/SA106-2013 Grade B/C NDE, A53-2012/SA53-2013 Grade B Type S, NACE MR0175-2009 MR0103-2012

Product Markings

Production Method: Product Standards:

Product:

Seamless Carbon Steel Pipe

Hot Expansion

Product Heat Number: Product Heat Treatment:

brizteel

NPS 36 STD 0.375 INCHWT SMLS 2015/07 NDE 790PSI

HEAT BSM-2462 (PIPE # LENGTH MASS) 142.7lb/ft ASTM/ASME A/SA106 GR B/C A/SA53 GR B NACE MR0175/MR0103 MADE IN CANADA

							. ,,		2					
Plain End	Pass	Pass	Pass	Pass	Pass	Pass	<20	<b>&amp;</b>	142.7	DRL	2	NPS 36 STD 0.375in. WT	Heat	BSM-2462
S Condition	790PSI/ 5 s	ASTM E213 ASTM E309 790 PSI/ 5	ASTM E213	WT		Insp.	Gauss	μR/hr	lb/ft					
End	HydroTest	ET	UT	TU	QD	Visual	Res. Mag.	Geiger	Mass	Length	Pieces	Product Size	Test Type	Heat
			Non-Destructive Testing	n-Destruc	Nc							Product: Details		

BSM-2462 Heat Degas; Fully Killed Blast Furnace; EAF; Ladle Refining; Vacuum Steelmaking Method Product Test Type Heat 0.17 0.17 1.21 1.21 Z 0.017 0.016 Chemical Analysis (wt%) 0.003 0.004 0.31 0.29 S 0.03 0.03 Ç 0.01 0.01 5 0.01 0.01 S 0.01 0.01 Z 0.053 0.050 0.003 0.001 0.001 0.001 В 0.0005 0.0004 CE(IIW) 0.39 0.39 CE(CSA) 0.39 0.39

45	0.74	75,500	56,000	Longitudinal; 1.5 in. x WT	Pass	82 HRBW	Ferrite & Pearlite	Heat	BSM-2462
%	(Rt0.5/Rm)	psi	psi	2 in. GL					
Elongation (A)	٧/٦	Tensile (Rm)	Yield (Rt0.5)	Tension Test	Flattening Test	Hardness	Microstructure	Test Type	Heat
				Mechanical Properties					

BSM-2462			Heat
		Standard	Test
ts		Sample Details	Impact Test
r		ငိ	Temp
1		_	
1		_	Impact
		_	Energy
		AVG	
		%	
		%	% SI
1		%	Shear
		AVG	
•		mm	
t		mm	Lateral Ex
ı		mm	(pansion
ı		AVG	

## Additional Details:

- ✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected by Bri-Steel Manufacturing in accordance with ASTM/ASME A106-2014/SA106-2013, A53-2012/SA53-2013, and the purchase order requirements, and that the results meet the corresponding requirements. Bri-Steel Manufacturing is registered and certified to ISO-9001:2008 and API Q1
- ✓ This pipe product meets the sour service requirements of NACE MR0175/ISO 15156-2:2009 Annex A2 for Region 3 Sour Service, and NACE MR0103-2012 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.
- $\checkmark$  This certificate represents a quality control system that is compliant with EN 10204:2004 Type 3.1.

Mill Test Certificate approved by:

am Suly /21/201

Tonya Lam, C.E.T.

Assistant QA Manager