

Mill Test Certificate

2125-64 Avenue, Edmonton, AB Canada T6P 1Z4 Bri-Steel Manufacturing Inc.

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Production Method: Product: Seamless Carbon Steel Pipe

> Product Heat Number: BSM-2438 Product Size: 30XS

As-rolled

Production Date: Jun 17, 2015

Hot Expansion **Product Heat Treatment:**

ASME B36.10-2004, API 5L-45th Ed. Grade B/X42 PSL1, ASTM/ASME A106-2014/SA106-2013 Grade B NDE, A53-2012/SA53-2013 Grade B Type S, NACE MR0175-2009 MR0103-Certificate No.: MTR- 001837

Product Standards:

Product Markings HEAT BSM-2438 (PIPE # LENGTH MASS) 157.5Ib/ft ASTM/ASME A/SA106 GR B A/SA53 GR B NACE MR0175/MR0103 MADE IN CANADA <API & L/C No.> API SPEC 5L NPS 30 XS 0.500 INCHWT 157.5LB/FT GR B/X42 PSL1 SMLS 2015/06 NDE 1260PSI

Test Type **Product Size Product: Details** Non-Destructive Testing

BSM-2438 Heat Heat NPS 30 XS 0.500in. WT Pieces Length DRL 157.5 Mass lb/ft Chemical Analysis (wt%) Geiger μR/hr ŝ Res. Mag. Gauss <20 Visual Pass insp. Pass 9 Pass ₹ ASTM E213 ASTM E309 1260 PSI/ Pass Pass HydroTest Pass 5 S 32.5° Bevel Condition End

5	45	2	0.62	69,500	69,	43,000		. x WT	Longitudinal; 1.5 in. x	Longitud		Pass	יד	74 HRBW	74	Ferrite & Pearlite	Heat	BSM-2438
٥١	> 0	'Rm)	(Rt0.5/Rm)	psi	75	psi			2 in. GL									
tion (A)	Elongation (A)	1	۲/۲	Tensile (Rm)		Yield (Rt0.5)	Yie		Tension Test	Te		Flattening Test	Flatte	Hardness	Hai	Microstructure	Test Type	Heat
						00000000			erties	Mechanical Properties	Mechan							
	í	,	ı	,	1		1	1	1		e	1	ı	г				
0.36	0.36	0.001 0.0003 0.36		0.001	0.004	0.03	0.01	0.07	0.04	0.23	0.004	0.011	0.20 0.84 0.011 0.004 0.23	0.20	Product			
	ı	0.0004	0.001	0.001	0.001	0.03	0.01	0.06	0.04	0.002 0.24	0.002	0.009	0.86	0.19	Heat	Diast Furnace; EAF; Ladle Rerining; Vacuum Degas; Fully Killed	Degas; Fully Killed	B5M-2438
CE(IIW) CE(CSA)	CE(IIW)	В	Nb	Ħ	<	<u>z</u>	Mo	S.	ر د	Si	S	P	Mn	C	Test Type	Steelmaking Method	Steelr	Heat

	BSM-2438			Heat	
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	1	500000000000000000000000000000000000000	mm	Lateral Ex	
		The second secon	mm	xpansion	
			AVG		

Additional Details:

- ✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected by Bri-Steel Manufacturing in accordance with API 51-45th Ed., ASTM/ASME A106-2014/SA106-2013 Grade B 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-2009 NACE
- ✓ 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:

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Tonya Lam, C.E.T.

Assistant QA Manager