

## Mill Test Certificate

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

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Product: Seamless Carbon Steel Pipe Product Heat Number: BSM-2278 Product Size: **26STD** Production Date: Mar 04, 2015

Product Heat Treatment: As-rolled Certificate No.: MTR-001617

**Product Standards:** ASME B36.10-2004, API 5L-45th Ed. Grade B PSL1, 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:

Hot Expansion



<API & L/C No.> API SPEC 5L NPS 26 STD 0.375 INCHWT GR B PSL1 SMLS 2015/03 NDE 700PSI HEAT BSM-2278 (PIPE # LENGTH MASS) 102.6Ib/ft ASTM/ASME A/SA106 GR B/C A/SA53 GR B NACE MR0175/MR0103 MADE IN CANADA

BSM		_	
BSM-2278		Heat	
Heat		Test Type	
NPS 26 STD 0.375in. WT		Product Size	Product: Details
1		Pieces	
DRL		Length	
102.6	lb/ft	Mass	
<b>%</b>	μR/hr	Geiger	
<20	Gauss	Res. Mag.	
Pass	Insp.	Visual	
Pass		OD	No
Pass	WT	TU	Non-Destructive Testing
Pass	ASTM E213 ASTM	UT	ive Testing
Pass	ASTM	ET	en e
Pass	700 PSI/ 5 s	HydroTest	
32.5° Bevel	5 <sub>S</sub> Condition	End	

	ш.	_		1	<u></u>	г	
	BSM-2278	Heat			BSM-2278		חבמנ
Blast Furnace; EAF; Degas; Fully Killed		Stee			Heat		lest Type
Blast Furnace; EAF; Ladle Refining; Vacuum Degas; Fully Killed		Steelmaking Method			NPS 26 STD 0.375in. WT		Floduct Size
Product	Heat	Test Type			WT		_
0.20	0.19	С			1		Fieces Length
260	0.96	Mn			DRL		rengin
Product 0.20 0.98 0.011 0.009 0.22 0.09	0.010 0.008	P	_		102.6	lb/ft	IVIASS
0 009	0.008	s	Chemical Analysis (wt%)		<b>.</b>	μR/hr	Geiger
0 22	0.23	Si	nalysis (v		_	-	
0 09	0.09	Cr	vt%)		<20	Gauss	Kes. IVIag.
0.04	0.04	Cu			Pass	Insp.	VISUAI
0.01	0.00	Мо			Pass		0
0.03	0.02	N:			Pass	WT	_
0.01 0.03 0.003 0.001 0.000 0.38	0.001	٧			Pass	ASTM E213 ASTM	
0 000	1	Ti				213 AS	-
0 001	1	Nb			Pass		
0 0004	ı	В			Pass	700 PSI/ 5 s Condition	Hydrolest
0 20	1	CE(IIW)				5 s C	155
0 30	,	CE(IIW) CE(CSA)			32.5° Bevel	ondition	End

			Froduct 0.20 0.38 0.011 0.009 0.22 0.09	0.20	0.98	TTO.0	0.009	0.22	0.09	0.04	0.01 0.03	0.03	0.003	0.002	0.003 0.002 0.001 0.0004 0.39 0.39	0.0004	0.39	0.39
							Mechanic	Mechanical Properties	ties									
Heat	Test Type	Microstructure	Hardness	ess	Flattening Test	າg Test		Tens	Tension Test		Yield	Yield (Rt0.5)	Tensile (Rm	(Rm)	Τ/Υ		Elongation (A	'n (A)
								50r	50mm GL			psi	psi	si	(Rt0.5/Rm	m)	%	
BSM-2278	BSM-2278 Heat	Ferrite & Pearlite	77 HRBW	W.	Pass	55	Loi	Longitudinal; 38.1 mm x	; 38.1 mm	) x WT	4	43,800	73,5	73,500	0.60		39	

	BS		
	BSM-2278		Heat
	ı	Standard	Test
	ı	Sample Details	Impact Test
	1	റ്	Temp
2	1	J	
	ī	_	Impact
	ı	٦	Energy
	1	AVG	
		%	
	-	%	% Shear
	-	%	lear
	-	AVG	544.5139625
	r	mm	
	1	mm	Lateral Ex
	1	mm	xpansion
	r	AVG	

## Additional Details:

- ✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected by Bri-Steel Manufacturing Inc. in accordance with results meet the corresponding requirements. Bri-Steel Manufacturing is registered and certified to ISO-9001:2008 and API Q1. API 5L-45th Ed., ASTM/ASME A106-2014/SA106-2013 Grade B/C A53-2012/SA53-2013, and the purchase order requirements, and that the
- √ This pipe product meets the sour service requirements of NACE MR0175/ISO 15156-2:2009 Annex A2 for Region 3 Sour Service-2009 NACE MR0103-2012 Section 2.1
- ✓ No weld repairs have been performed on this product.
- $\checkmark$  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:

Tonya Lam, C.E.T.

Assistant QA Manager