

Mill Test Certificate

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

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www.brichemsteel.com

Product Size: **NPS 14 XS** Production Date: August 21, 2013

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

Seamless Carbon Steel Pipe

Product Heat Number:

BSM-1165

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 14 XS 0.5 inchWT HEAT BSM-1165 (PIPE # LENGTH MASS) 72.091b/ft NDE SMLS NACE MR0175 2013/08 MADE IN CANADA.

В	Γ		Τ
BSM-1165	Heat		
Heat	Test Type		
NPS 14 XS 0.5 in.WT	Product Size		Product Detail
5	Pieces		s
DRL	Length		
72.09	lb/ft	Mass	
Ġ	μR/hr	Geiger	
<20	Gauss	Res.Mag.	
Pass	Insp.	Visual	
Pass	OD		Non-D
Pass	WT	TU	estructive T
Pass	ASTM E213 /	П	esting
Pass	ASTM E309	ET	
-		HydroTest	
32.5° Bevel	Condition	End	

						Chemical	Chemical Analysis (wt%)	(wt%)								9	
Heat	Steelmaking Method	Analysis	1	<u> </u>	D	n	<u>c</u> :	?	<u>.</u>	5	<u>.</u>	<	:!	<u> </u>	D	(III)	(35)
BSM-1165	Blast Furnace; EAF; Ladle Refining;	Heat	0.19	0.94	0.010	0.004	0.25	0.03	0.07	0.01	0.04	•	,		0.0003	,	,
3	Vacuum Degas; Fully Killed	Product	0.21	0.98	0.014	0.012	0.98 0.014 0.012 0.28	0.03	0.08	0.01	0.04	0.003	0.001	0.001	0.0002	0.39	0.40

Hardness	Toncion Toct	V: 040 (BtO E)	Topollo (Dan)	
Hardness	Tension Test	Yield (Rt0.5)		Tensile (Rm)
Test Type Microstructure HRBW Flattening Test	50mm GL	ps:		psi.
BSM-1165 Heat Ferrite & Pearlite 76 Pass L	Longitudinal; 38.1mm x WT	44,100	_	72,000

	BSM-1165	неаг	=
	,	Standard	Test
	1	Sample Details	Impact Test
	· ·	Ω	Temp
		_	
	i	_	Impact
		٠	Energy
		AVG	
	ı	%	
	1	%	% Sh
	,	%	ear
	,	AVG	
33	-	mm	
	1	mm	ateral Ex
	1	mm	pansion
	,	AVG	

Additional Details:

results meet the corresponding requirements. Inc. in accordance with ASTM/ASME A/SA106-2011, A/SA53-2012, and the purchase order requirements, and that the $\checkmark~$ We hereby certify that this pipe product was manufactured, sampled, tested and inspected by Bri-Steel Manufacturing

Service, and NACE MR0103-2010 Section 2.1. ✓ This pipe product meets the sour service requirements of NACE MR0175/ISO 15156-2:2009 Annex A2 for Region 3 Sour

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:

105 suden 2013 AUG 27

Paul Sowden, T.T.

Assistant QA Manager