

Mill Test Certificate

Bri-Steel Manufacturing Inc.

2125-64 Avenue, Edmonton, AB Canada T6P 1Z4 Tel: 001 (780) 469-6603

Fax: 001 (780) 469-6986

www.brichemsteel.com

Product: Seamless Carbon Steel Pipe

Production Method:

Hot Expansion

Product Heat Number: BSM-0340

NPS 24 XS

Production Date:

May 22, 2012

Product Size:

Product Heat Treatment: As-rolled

Product Standards: ASTM/ASME A/SA106-2011 Grade B/C, A/SA53-2012 Grade B Type S, NACE MR0175-2009

Product Markings: .BRI-STEEL MFG NPS 24 XS ASTM/ASME A/SA106 GR B/C A/SA53 GR B HEAT BSM-0340 (PIPE # LENGTH MASS) 125.5Ib/ft NDE 970PSI NACE MR0175 2012/05 MADE IN CANADA.

Product Details Non-Destructive Testing Non	B	Т		Т
Product Details Non-Destructive Testing Non	SM-0340	неат		
Product Details Non-Destructive Testing Non-Destructive Testing Non-Destructive Testing Non-Destructive Testing UT UT ET HydroTest SCH Pieces Length Leng	Heat	lest lype	ł ł	
Details Non-Destructive Testing Non-Destructive Testing Non-Destructive Testing Non-Destructive Testing UT UT ET HydroTest HydroTest HydroTest HydroTest ASTM E213 ASTM E309 970 psi/Ss DRL 125.50 <5 <20 Pass Pass Pass Pass Pass	24	NPS		-
Non-Destructive Testing Mass Geiger Res.Mag. Visual Pieces Length lb/ft μR/hr Gauss Insp. OD WT ASTM E213 ASTM E309 970 psi/Ss 10 DRL 125.50 <5 <20 Pass Pass Pass Pass Pass	XS	SCH		
Mass Geiger Res.Mag. Visual UT UT ET HydroTest h lb/ft μR/hr Gauss Insp. OD WT ASTM E213 ASTM E309 970 psi/Ss 125.50 <5 <20 Pass Pass Pass Pass Pass	10	Pieces		IIS
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Non-Destructive Testing Visual UT UT Insp. OD WT ASTM E213 ASTM E309 970 psi/5s Pass Pass Pass Pass Pass Pass Pass	G	µR/hr	Geiger	
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g UT ET HydroTest M E213 ASTM E309 970 psi/5s Pass Pass	Pass	WT	TU	uctive
HydroTest 309 970 psi/5s Pass		ASTM E213	UT	esting
HydroTest 970 psi/5s Pass	Pass	ASTM E309	日	
End Condition 37.5° Bevel	Pass	970 psi/5s	HydroTest	
	37.5° Bevel	Condition	End	

BSM-0340	Heat		
Heat	Test Type		
Refining; Vacuum Degas	Blast Furnace; EAF; Ladle	Steelmaking Method	
0.21	0		
0.88	Mn		
0.007	Р		
0.014	S		Chemical
0.20	Si		Ana
0.02	ਹ		lysis (wt%)
0.08	Cn		
0.01	Mo		
0.04	<u>z</u> .		
0.003	<		
0.001	#		
0.001	Nb		
0.0003	В		
0.37	(IIW)	æ	
0.38	(CSA)	æ	

		BSM-0340 Heat	Heat		
		Heat	Test Type		
		Ferrite & Pearlite	Microstructure		
		74	HRBW	Hardness	
		Pass	Flattening Test		Mechan
roughtading.	longitudinal	Transverse	Flattening Test 50mm GL; 38mm x WT	Tension Test	Mechanical Properties
77,700	000 00	41,100	psi	Yield (Rt0.5)	
77,170	001 00	39,400	psi	Yield (Rp0.2)	
05,000	60 000	69,500	psi	Tensile (Rm)	
0.04	0.64	0.59	(Rt0.5/Rm)	Τ/Υ	
‡	22	48	%	Elongation (A)	

Additional Details:

Inc. in accordance with ASTM/ASME A/SA106-2011, A/SA53-2012 and the purchase order requirements, and that the results meet the corresponding requirements. 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 meet the sour service requirements of NACE MR0175/ISO 15156-2:2009 Annex A2 for Region 3 Sour

 $\checkmark~$ This certificate represents a quality control system that is compliant with EN 10204:2004 Type 3.1 No weld repairs have been performed on this product. This product has no mercury contamination.

Mill Test Certificate approved by:

Manager of Quality and R&D Kenton Dechant, P.Eng. 2012 June 13