

## Mill Test Certificate

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BSM-2479 Product Size: NPS 30 STD

Production Date:

Jul 22, 2015

ThermoMechanical Formed Certificate No.: MTR- 001896

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

**Product Markings** 

Production Method:

Hot Expansion

**Product Heat Treatment:** Product Heat Number:

Product:

Seamless Carbon Steel Pipe

HEAT BSM-2479 (PIPE # LENGTH MASS) 118.6lb/ft ASTM/ASME A/SA106 GR B A/SA53 GR B NACE MR0175/MR0103 MADE IN CANADA NPS 30 STD 0.375 INCHWT SMLS 2015/07 NDE 600PSI

							1000	Chamical Analysis (w+0/)	5					
Plain End	Pass	Pass	Pass	Pass	Pass	Pass	<10	<5	118.6	DRL	H	NPS 30 STD 0.375in. WT	Heat	BSM-2479
5 <sub>S</sub> Condition		ASTM E213 ASTM E309 600 PSI/	ASTM E213	WT		insp.	Gauss	μR/hr	lb/ft					
End	HydroTest	ET	UT	UT	OD	Visual	Res. Mag.	Geiger	Mass	Pieces Length	Pieces	Product Size	Test Type	Heat
			Non-Destructive Testing	on-Destruc	No							Product: Details		

1	1	1	1	1	ı	ı	t	1	1	1	Ü	ı	,	1			
0.36	0.36	0.0002	0.001	0.001	0.003	0.03	0.01	0.08	0.05	0.21	0.004	0.009	0.86	0.20	Product	regas, i un y misco	
0.08	0.17	0.0003	,	71	i i	0.04	0.01	0.07	0.04	0.22	0.005	0.008	0.85	0.17	Heat	Blast Furnace; EAF; Ladle Refining; Vacuum	BSM-2479
CE(CSA)	CE(IIW)	В	dN	Τi	٧	<u>Z</u>	Mo	Cu	Cr	Si	S	P	Mn	C	Test Type	Steelmaking Method	Heat
	7								(wt%)	Chemical Analysis (wt%)	Chemical						

Mechanical Properties

AVG	mm	mm mm	AVG m	% A	%	%	J AVG	_	_	റ്	Sample Details		Standard	
943 943	Lateral Expansion	Lateral		ar	% Shear		ergy	Impact Energy		Temp	Impact Test		Test	Heat
							0.00			and the second				
	45	0.66	0	64,000	42,400	2	; 1.5 in. x WT	Longitudinal; 1.5 in. x		Pass	70 HRBW	Ferrite & Pearlite	Heat	BSM-2479
	%	(Rt0.5/Rm)	(+	psi	psi		2 in. GL	2 in						
on (A)	Elongation (A	Y/T	Rm)	Tensile (Rm)	Yield (Rt0.5)	Yie	Tension Test	Tensic	_	Flattening Test	Hardness	Microstructure	Test Type	Heat

	BSM-2479		Heat
	1	Standard	Test
	ı	Sample Details	Impact Test
	•	°C	Temp
		L	
		J	Impact En
	,	J	Energy
		AVG	
		%	
	ı	%	% Shear
		%	ear
	1	AVG	
	t	mm	
	•	mm	Lateral Ex
		mm	pansion
	,	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.
- √ This certificate represents a quality control system that is compliant with EN 10204:2004 Type 3.1.

Mill Test Certificate approved by:

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