

boltex mfg. co., l.p.

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ORDER NUMBER	0169026
PO NUMBER	BX012AA
ORDER DATE	01/31/22

MATERIAL TEST REPORT

ITEMS

Ln#	Qty	Description	Matl Spec	Ht Cd	Mill Heat Number	CE
001	258	1" 150 RF SO	A/SA105	S826	CM3106467	0.39
001	12	1" 150 RF SO	A/SA105	S848	CM3108828	0.41
002	90	4" 150 RF SO	A/SA105	S824	CM3107705	0.40
003	73	8" 150 RF SO	A/SA105	1A352	CM3105929	0.40
003	55	8" 150 RF SO	A/SA105	T709	CM3107697	0.39
004	3	10" 150 RF SO	A/SA105	Y236	CM3075491	0.40
004	51	10" 150 RF SO	A/SA105	Y234	CM3074504	0.40

CHEMICAL PROPERTIES

Ladle Chemical Properties Indicated with an Asterisk ()

Ht Cd	C	Si	Mn	P	S	Cr	Al	Cu	Ni	Mo	V	Nb	Sn	N	B	Pb	Ti
S826	0.1900	0.2000	0.9700	0.0110	0.0200	0.0600	0.0010	0.2600	0.1000	0.0260	0.0000	0.0000	0.0100	0.0000	0.0001	0.0000	0.0010
S848	0.2000	0.2100	1.0100	0.0100	0.0247	0.0600	0.0010	0.3000	0.1000	0.0280	0.0000	0.0000	0.0090	0.0000	0.0001	0.0000	0.0010
S824	0.1900	0.2400	1.0200	0.0120	0.0140	0.0600	0.0020	0.2700	0.0900	0.0270	0.0000	0.0010	0.0080	0.0000	0.0001	0.0000	0.0010
1A352	0.1900	0.2100	1.0000	0.0090	0.0150	0.0700	0.0020	0.2800	0.0900	0.0280	0.0000	0.0010	0.0090	0.0000	0.0000	0.0000	0.0010
T709	0.1800	0.2100	1.0100	0.0120	0.0230	0.0700	0.0010	0.2800	0.0900	0.0230	0.0000	0.0010	0.0090	0.0000	0.0002	0.0000	0.0010
Y236	0.1900	0.2300	1.0200	0.0130	0.0190	0.0900	0.0020	0.2800	0.0700	0.0110	0.0010	0.0020	0.0130	0.0000	0.0000	0.0000	0.0000
Y234	0.1900	0.2400	1.0100	0.0100	0.0220	0.0900	0.0020	0.2400	0.0700	0.0130	0.0000	0.0030	0.0070	0.0000	0.0000	0.0000	0.0000

PHYSICAL PROPERTIES

Ht Cd	Tensl	Yield	%Elong	%R.A.	HBW	Charpy	Ft-Lbs	Lat Expsn	%-Shear	Test Temp
S826	80500	46000	32.00	69.62	163/170					
S848	77500	41400	33.90	69.19	167/170					
S824	80500	46900	30.20	68.30	170/174	0	0	0	0	0
1A352	78800	46000	23.80	66.95	167/167					
T709	78400	45700	28.10	60.81	167/167					
Y236	85200	57400	31.80	64.00	167/174					
Y234	86300	65300	32.40	66.96	170/170					

NOTES

Ht Cd	Country of Melt	Note
S826	United States	
S848	United States	
S824	United States	
1A352	United States	
T709	United States	
Y236	United States	
Y234	United States	

All flanges bearing the "BOLTEx" name are machined in the United States at our Houston Texas facility. Flanges marked with "MADE IN USA" or "USA" are made from steel melted in the United States. Country of melt is shown in the notes section above. Billet used in the manufacturing process has been fully killed. Boltex flanges are manufactured, sample tested and inspected according to the requirements of ASME SA105-19/ ASTM A105-21 or ASTM A694-16 and any other Purchase Order requirements.

It is guaranteed that all Boltex forged steel flanges marked B16 or MSS, adhere to and comply with all dimensions and tolerances in accordance with specification ASME B16.36-2020, ASME B16.47-2020/ASME B16.47-2020 or ANSI MSS SP-44-2016/2010 as applicable for flanges. Boltex flanges have a surface finish of 125/250 roughness average (Ra) on all faces and raised face finishes.

We certify our flanges marked B16 or MSS, are capable of passing a hydrostatic test compatible with their rating and all test results and process information contained herein are correct and true as contained in company records. All flanges marked A/SA105 or A/SA105N will meet ANSI/NACE MR0175/ISO 15156 and/or MRO-103 Latest Revision.

Our quality system has been registered by DNV-GL to ISO 9001, Certificate No.: 142240-2013-AQ-USA-ANAB. This MTR complies with EN 10204-3.1. Our flanges satisfy the material requirements for PED 2014/68/EU Annex 1-4.3. Notwithstanding the absence of a signature, the organization submitting either a printed certificate or an EDI transmitted certificate is responsible for report content or the report as per ASTM A961-19 Section 19.4.

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M. S. ...
Quality Assurance Manager