

boltex mfg. co., l.p.

4901 Oates Road Houston TX 77013
(713)675-9433 Fax: (713)672-6527

ORDER NUMBER	0009489
PO NUMBER	1234567
ORDER DATE	10/09/15

MATERIAL TEST REPORT

S O L D	BOLTEX MANUFACTURING CO, LP 4901 OATES ROAD HOUSTON TX 77013	S H I P	BOLTEX MANUFACTURING CO, LP 4901 OATES ROAD HOUSTON TX 77013
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ITEMS

Ln#	Qty	Description	Matl Spec	Heat Code	Mill Heat Number
001	1	10" 300 RF WN STD	SA105-14	N485	CM3045142
002	1	12" 600 RF WN STD	SA105-N-14	K860	CM1034314
003	1	12" 600 RF WN STD A694 F65	A694-14	K398H	WR14531

CHEMICAL PROPERTIES

HEAT CODE	C	SI	MN	P	S	CR	AL	CU	NI	MO	V	CB	SN	CE
N485	0.200	0.210	0.980	0.014	0.011	0.170	0.002	0.270	0.110	0.028	0.002	0.003	0.012	0.000 0.000 0.429
K860	0.190	0.240	0.880	0.018	0.022	0.200	0.000	0.390	0.120	0.036	0.003	0.001	0.012	0.011 0.000 0.419
K398H	0.150	0.190	1.170	0.010	0.003	0.090	0.022	0.220	0.100	0.050	0.072	0.003	0.011	0.008 0.003 0.409

PHYSICAL PROPERTIES

HEAT CODE	TENSL	YIELD	%ELONG	%R.A.	HBW	CHARPY	FT-LBS	LAT EXPSN	SHR FRACT	TEST TEMP
N485	81700	49700	33.50	54.80	163/163					
K860	77900	46700	35.80	62.76	156/159					
K398H	83400	65200	32.60	62.00	217/223					

NOTES

HEAT CODE	NOTE
N485	
K860	NORMALIZED, TEMP/1650F, TIME @ TEMP/1 HR PER INCH, AIR COOL
K398H	NORMALIZED, QUENCHED & TEMPERED

All products bearing the "BOLTEX" name or logo "b" with the heat number prefix listed on the legend below have been manufactured at our Houston, TX facilities from steel melted and forged in the U.S.A. All other products have been manufactured at our Houston, TX facilities.

AR = Arkansas CM or SI = Commercial Metals Corp. GER = Germany NU = Nucor Steel
RE = Republic Steel TI = Timken Steel WR = Warren Steel

We certify our flanges 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 meet NACE MRO-175 and/or MRO-103 Latest Revision.

Our quality system has been registered by ABS to ISO 9001, Certification No.: 30696. Test results comply with: EN 10204-3.1. Our flanges satisfy the material requirements for PED 97/23/EC Annex 1-4.3.

Notwithstanding the absence of a signature, the organization submitting either a printed certificate or an EDI transmitted certificates is responsible for content or the report. (ASTM/A 961-04a Section 19.4)

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Quality Assurance Manager