

HT# T4K5



METALLURGICAL TEST REPORT

6870 Highway 42 East
Ghent, KY 41045-9615
(502) 347-6000

Certificate: 37826 21	Mail To: COPPER AND BRASS SALES, INC. ATTN: ACCOUNTS PAYABLE SOUTHFIELD MI 48086-	Ship To: COPPER AND BRASS SALES, INC. 8001 MURPHY WAY NORTHWOOD OH 43619	Date: 3/04/2015 Page: 1 Of 1
Customer: 0925 045			Steel: 316/316L
NAS Order: LP 32321 5			Finish: Hot Finish
Your Order: 5400251476	Item Code: SSRD00696		Dia/Thk: 5.0000 in
			Leg Length: 144.00 in
			Corrosion: ASTM A262 Prac E OK

PRODUCT DESCRIPTION:

Round Bar, Hot Rolled, Annealed, Rough Turned
UNS 31600/31603 EN 10204 3.1, ASTM A484/13a
ASTM A276/13, ASTM A479/13a, ASTM A182/13 CHEM ONLY,
ASME SA479/13, ASME SA182/10 CHEM ONLY, ASTM F899/11
AMS 5648L/AMS 5653E, AMS QQS-763C, QQS 763F
NACE MR0175/MR0103 (MID RADIUS ONLY),
SOLUTION ANNEAL TEMP 1900F MIN, ASTM A320/08 CL 1 GR B8M
ASTM A193/10A-ASME SA193/10 CL 1 GR B8M(EXC PAR 7.2)

REMARKS:

COMPLIES W/REQUIREMENTS OF DFAR 252.225-7009 EU DIRECTIVE
2011/65/EU.ROHS. EAF+AOD+CC. NO WELD REPAIR. MELTED AND MFG
IN USA FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight
BH03103	2651								

Lab Accreditation Bureau, ISO/IEC 17025, Certificate# L2323

CHEMICAL ANALYSIS

CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan) Chemical Analysis per ASTM A751/08

Heat	Supplier #	CM	C %	CO %	CR %	CU %	MN %	MO %	N %	NI %	P %	S %
T4K5		US	.028	.53	16.53	.32	1.36	2.00	.037	10.48	.032	.0255
			SI %									
			.36									

MECHANICAL PROPERTIES

Id	HB	.2YS	UTS	RA	Elong	
No.		KSI	KSI	%	% 4D	
BH03103	R L	141.0	37.00	80.00	58.00	44.00

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS

Technical
Dept. Mgr.

AB Shraw
ABHIJEET BHAVE

Del.: 24038666414
 CstOr 529
 Date 05/14/2015
 From: Copper and Brass Sales CA
 Cust. TECHNOWORX INC
 CstAr
 Wgt.: 2,169.234 LB

John J. Zambetti