



# METALLURGICAL TEST REPORT

## J3T1-325

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

<b>Certificate:</b> 862440 02	<b>Mail To:</b> COPPER AND BRASS SALES, INC. ATTN: ACCOUNTS PAYABLE SOUTHFIELD MI 48086-	<b>Ship To:</b> COPPER AND BRASS SALES, INC. C/O CBS - HOUSTON HOUSTON TX 77041	<b>Date:</b> 8/18/2013 <b>Page:</b> 1 of 1
<b>Customer:</b> 0925 061			<b>Steel:</b> 316/316L
<b>NAS Order:</b> LP 4685 5			<b>Finish:</b> Hot Finish
<b>Your Order:</b> 5400188442	<b>Item Code:</b>		<b>Dia/Thk:</b> 3.2500 in
			<b>Leg Length:</b>
			<b>Length:</b> 144.00 in
			<b>Corrosion:</b> ASTM A262 Prac E OK

### PRODUCT DESCRIPTION:

Round Bar, Hot Rolled, Annealed, Rough Turned  
UNS 31600/31603 EN 10204 3.1, ASTM A484/11  
ASTM A276/10, ASTM A479/12, ASTM A182/10 CHEM ONLY,  
ASME SA479/10a, ASME SA182/10 CHEM ONLY, ASTM F899/11  
AMS 5648L/AMS 5653G, AMS QQS-763B, 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 DPAR 252.225-7014A-1 EU DIRECTIVE  
2011/65/EU.ROHS. EAF+AOD+CC. NO WELD REPAIR. MELTED AND MPG  
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
BF65661	1432								

### 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 %
J3T1		US	.017	.27	16.56	.29	1.42	2.05	.029	10.50	.029	.0240
			SI %									
			.30									

### MECHANICAL PROPERTIES

1 4	HB	.2YS	UTS	RA	Elong	
o i	No.	KSI	KSI	%	% 4D	
S F						
BF65661	R L	154.0000	41.0000	85.00	68.00	54.00

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.

ERIC HESS

from: Copper and Brass Sales CA  
Cust. M2M MACHINING  
Del.: 2403355045  
CstOr 2012-495  
Date 08/28/2014  
Wgt.: 715 LB