



#5K2

METALLURGICAL TEST REPORT

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

Certificate: 838842 02	Mail To: COPPER AND BRASS SALES, INC. ATTN: ACCOUNTS PAYABLE SOUTHFIELD MI 48086-	Ship To: COPPER AND BRASS SALES, INC. 13338 ORDEN DRIVE SANTA FE SPRINGS CA 90670	Date: 5/27/2013 Page: 1 Of 1 Steel: 316/316L Finish: Hot Finish Dia/Thk: 5.0000 in Leg Length: Length: 144.00 in Corrosion: ASTM A262 Prac E OK
Customer: 0925 023			
NAS Order: LP 1101 4			
Your Order: 5400180820	Item Code:		

PRODUCT DESCRIPTION:

Round Bar, Hot Rolled, Annealed, Rough Turned
UNS 31600/31603 EN 10204 3.1, ASTM A484/11
ASTM A276/10, ASTM A479/11, 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 DFMAR 252.225-7014A-1 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
BF44281	2336								

CHEMICAL ANALYSIS

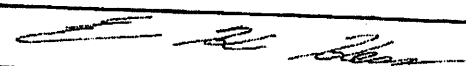
Heat	Supplier #	CM	CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan)								Chemical Analysis per ASTM A751/08			
			C %	CO %	CR %	CU %	MN %	MO %	N %	NI %	P %	S %		
H5K2		US	.015	.20	16.60	.41	1.46	2.08	.041	10.52	.031	.0255		
			SI %											
			.23											

MECHANICAL PROPERTIES

I d o i C r	HB	No.	.2YS	UTS	RA	Elong
			KSI	KSI	%	% 4D
BF44281	R L	140.0	38.00	82.00	55.00	43.00

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