



3 TBR 80
PO# 2087

METALLURGICAL TEST REPORT

NORTH AMERICAN STAINLESS
6870 HIGHWAY 42 EAST
GHENT, KY 41045

6870 HIGHWAY 42 EAST

EOP4

Certificate: 781494 2 Mail To:
COPPER AND BRASS SALES, INC.
Customer: 000925 900 CUSTOMER PICKUP
13338 ORDEN DRIVE
SANTA FE SPRINGS, CA 90670

Ship To:
COPPER AND BRASS SALES, INC.
CUSTOMER PICKUP
13338 ORDEN DRIVE
SANTA FE SPRINGS, CA 90670

Date: 10/24/2012 Page: 1
Steel: 316/316L
Finish: ST

Your Order: 5400160758

NAS Order: IN 0155966 01

Corrosion: ASTM A262 Prac E OK

PRODUCT DESCRIPTION:

UNS 31600/31603, EN 10204 3.1B, NACE MR0175(MID RADIUS ONLY)
Round Bar, Annealed, Smooth Turned, Cold Finished
ASTM A276/10, ASTM A479/11, ASTM A182/10 CHEM ONLY,
ASME SA479/10a, ASME SA182/10 CHEM ONLY
AMS 5648L/AMS 5653G, AMS QQS-763B, QQS 763F
NACE MR0175/MR0103(MID RADIUS ONLY),
SOLUTION ANNEAL TEMP 1900F MIN

REMARKS:

COMPLIES W/REQUIREMENTS OF D FAR 252.225-7014A-1 EU DIRECTIVE
2002.95.EC.ROHS. EAF+AOD+CC. NO WELD REPAIR. MELTED AND MFG
IN USA FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

Product Id	Skid #	Diameter	Size	Weight	-----Length-----	Mark	Pieces	Commodity Code
BE9511 4		3.0000		1,129	144.00	2	1	

CHEMICAL ANALYSIS

CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan)

Chemical Analysis per ASTM A751/08

HEAT	CM	C %	CO %	CR %	CU %	MN %	MO %	N %	NI %	P %
EOP4	US	.0200	.2820	16.6595	.3395	1.5145	2.0270	.0498	10.5500	.0295
		S %	SI %							
		.0260	.3230							

MECHANICAL PROPERTIES

Product Id	l d	o i	HB	.2YS	UTS	RA	Elong
		c r	No.	KSI	KSI	%	% 4D
BE9511 4	R L		165.00	46.00	86.00	57.00	45.00

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

10/24/2012