

ESH9



METALLURGICAL TEST REPORT

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

Certificate: 796515 12 Mail To: COPPER AND BRASS SALES, INC.
ATTN: ACCOUNTS PAYABLE SOUTHFIELD MI 48086-
Customer: 0925 022 Ship To: COPPER AND BRASS SALES, INC.
CUSTOMER PICKUP GHENT KY 41045
Date: 12/20/2012 Page: 1 OF 1
Steel: 316/316L
Finish: Hot Finish
Dia/Thk: 4.0000 in
Leg Length:
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 A484/11
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 DFAR 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

Table with 9 columns: Bundle Weight, Bundle Weight, Bundle Weight, Bundle Weight, Bundle Weight, Bundle Weight, Bundle Weight, Bundle Weight, Bundle Weight. Row 1: BF05636 2072

CHEMICAL ANALYSIS

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

Chemical Analysis per ASTM A751/08

Table with 13 columns: Heat, Supplier #, CM, C %, CO %, CR %, CU %, MN %, MO %, N %, NI %, P %, S %. Row 1: ESH9, US, .019, .23, 16.75, .47, 1.35, 2.06, .045, 10.63, .033, .0275. Row 2: SI %, .23

MECHANICAL PROPERTIES

Table with 7 columns: Id, HB, .2YS, UTS, RA, Elng. Row 1: BF05636, R L, 172.0, 45.00, 87.00, 52.00, 68.00

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 report cannot be reproduced, except in its entirety, without the written approval of NAS

Technical Dept. Mgr.

Signature of Eric Hess, ERIC HESS

Del.: 2402308951

Date 02/12/2013

From: Copper and Brass Sales CA

Cust.

CstAr

Wgt.: 498.000 LB

Signature of John L. Gambetta