

3TBR40



METALLURGICAL TEST REPORT

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

| | | | |
|----------------------------|---|---|--------------------------------|
| Certificate: 301059 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: 6/07/2017 Page: 1 Of 1 |
| Customer: 0925 023 | | | Steel: 316/316L |
| NAS Order: LP 67158 4 | | | Finish: Hot Finish |
| Your Order: 5400353165-R05 | Item Code: SSRD00086 | | Dia/Thk: 3.2500 in |
| | | | Leg Length: |
| | | | Length: 144.00 in |
| | | | Corrosion: ASTM A262 Prac E OK |

PRODUCT DESCRIPTION:

Round Bar, Hot Rolled, Annealed, Rough Turned
 UNS S31600/S31603 EN 10204 3.1, ASTM A484/16
 ASTM A276/16A, ASTM A479/16A, ASTM A182/16A CHEM ONLY,
 ASME SA479/16A, ASME SA182/16A CHEM ONLY, ASTM F899/11
 AMS 5648M/AMS 5653H, AMS QQS-763D, QQS 763F
 NACE MR0175-03/MR0103-05 (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 |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| BI77350 1090 | BI77351 1088 | BI77353 1074 | | | | | | | |

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 A751/14a

| NAS Heat | Supplier Heat | CM | C % | CO % | CR % | CU % | MN % | MO % | N % | NI % | P % | S % |
|----------|---------------|----|------|------|-------|------|------|------|------|-------|------|-------|
| 405D | | US | .015 | .25 | 16.65 | .38 | 1.46 | 2.01 | .032 | 10.59 | .031 | .0240 |
| | | | SI % | | | | | | | | | |
| | | | .30 | | | | | | | | | |

MECHANICAL PROPERTIES

| l o c k | HB | .2YS KSI | UTS KSI | RA % | Eln % 4D |
|------------------|-------|-------------|------------|---------|-------------|
| BI77350 R L | 179.0 | 45.00 | 90.00 | 67.00 | 46.00 |
| BI77351 R L | 179.0 | 45.00 | 90.00 | 67.00 | 46.00 |
| BI77353 R L | 179.0 | 45.00 | 90.00 | 67.00 | 46.00 |

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

Cust. ATLANTIS INDUSTRIES Del.: 2405464469
 CstAr CstOr Bozo - Sept 25, 2017
 Wgt.: 361 LB Date 09/26/2017

Technical Dept. Mgr.

KRIS LARK