

Material Test Report

Heat Code: GNJ

An Ameri-Forge Group Company 13770 Industrial Rd. Houston, TX 77015 Sales: (713) 868-4421 Fax: (713) 455-8366

ISO 9001:2000 Certified

 PLESA ANAHUAC Y CIAS
 PO: 6051
 Sales Order: 68976
 Line: 10

 SA DE CV AV. VALLE DE LAS
 Item Code: 0151912101-0020F
 Qty Shipped: 20

 ALAMEDAS 66-0
 Item Desc: FLG 12.00 0150 WN RF STD

 54940 TULTITLAN, EDO, MEX
 Supplier: CMC
 Supplier Heat: 3006392

Spec: ASTM A 105/A 105M-(05)/ASME SA 105/SA 105M-(08a) Section II Part A

| Elen | nent (%wt) | Ladle | Product | EPCRA CAS# | Element (%wt) | Ladle | Product | EPCRA | CAS# |
|------|-------------|-------|---------|--------------------|---------------|---------|---------|-------|----------|
| С | Carbon | 0.20 | | | Cr Chromium | 0.09 | | √ 74 | 140-47-3 |
| Mn | Manganese | 0.89 | | √ 7439-96-5 | Mo Molybdenum | 0.03 | | | |
| P | Phosphorous | 0.006 | | | V Vanadium | 0.002 | | | |
| S | Sulphur | 0.024 | | | Cb Columbium | 0.003 | | | |
| Si | Silicon | 0.19 | | | C.E. | 0.39247 | | | |
| Cu | Copper | 0.21 | | √ 7440-50-8 | CuNiCrMo | 0.41 | | | |
| Ni | Nickel | 0.08 | | √ 7440-02-0 | CrMo | 0.12 | | | |
| | | | | 7110 02 0 | | 0.12 | | | |
| | | | | | | | | | |

| Mechanical T | esting | Other | | | | |
|----------------------------|-------------------|-------|--|---------|--|--|
| Test Lab | AFG | MILL | | CMC | | |
| Test Bar Size | SACRIFICIAL PIECE | MHC | | 3006392 | | |
| НВŴ | 149 - 149 | EF | | Y | | |
| Elg (%) | 37 | | | | | |
| RA (%) | 60 | | | | | |
| Tensile Specimen Size (in) | .249 | : | | | | |
| Tensile (ksi) | 77.0 | | | | | |
| Yield (ksi) | 41.0 | | | | | |
| Gauge Length | 1 | | | | | |
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Product compliant with NACE MR0175 / ISO 15156, latest edition and dimensions to ANSI B16.5
Product compliant with and meets all requirements of ASTM A105/ASME SA105, latest edition.
No Weld repair performed. Chemical Analysis results shown are actual. Forgings are capable of passing hydrostatic test compatible with the appropriate rating. Elongation taken from a round specimen. All material supplied under this order is certified to be free of mercury contamination and no mercury bearing equipment was used in manufacturing, fabrication or testing. Yield strength was determined using the 0.2% offset method.

EPCRA Supplier Notification: This product may contain one or more toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act (Title III of the Superfund Amendments and Reauthorization Act of 1986) and 40 C.F.R. Part 372. Potentially reportable chemicals are indicated with a checkmark in the "EPCRA" column and a Chemical Abstract Services (CAS) registry number is provided for each such chemical in addition to the percent by weight of the chemical present in this product. It is your responsibility alone to determine whether your facility is required to submit a Toxic Release Inventory Report under EPCRA Section 313.

Certification No.:

164475

Certification Date:

3/30/2009

Nicholas Tepovich - Metallurgic Lab Manager

This report is issued in compliance with the requirements of EN10204 3.1 / ISO 10474 3.1.b