



Material Test Report

Heat Code: A-3392

An Ameri-Forge Group Company

13770 Industrial Rd. Houston, TX 77015

ISO 9001:2000 Certified

Sales: (713) 868-4421 Fax: (713) 455-8366

PLESA ANAHUAC Y CIAS	PO: 7456	Sales Order: 72546	Line: 11
SA DE CV AV. VALLE DE LAS	Item Code: 0151916102-0020F		Qty Shipped: 14
ALAMEDAS 66-0	Item Desc: FLG 16.00 0150 WN RF XH		
54940 TULTITLAN, EDO, MEX	Supplier: MF RINGS	Supplier Heat: A-3392	
Spec: ASTM A105/A105M-(05)/ASME SA 105/SA 105M-(08a) Section II Part A			

Element	(%wt)	Ladle	Product	EPCRA	CAS#	Element	(%wt)	Ladle	Product	EPCRA	CAS#
C	Carbon	0.20				Cr	Chromium	0.02		✓	7440-47-3
Mn	Manganese	0.88		✓	7439-96-5	Mo	Molybdenum	0.01			
P	Phosphorous	0.024				V	Vanadium	0.008			
S	Sulphur	0.010				Cb	Columbium	0.005			
Si	Silicon	0.22				C.E.		0.37			
Cu	Copper	0.01		✓	7440-50-8	CuNiCrMo		0.05			
Ni	Nickel	0.01		✓	7440-02-0	CrMo		0.02			

Mechanical Testing		
Test Lab		MF RINGS
Test Bar Size		SACRIFICIAL PIECE
HBW		156 - 156
Elg (%)		28.6
RA (%)		56.5
Tensile Specimen Size (in)		0.498
Tensile (ksi)		75.1
Yield (ksi)		46.8
Gauge Length		2

Product compliant with NACE MR0175, latest edition and dimensions to ASME 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.: 175135
 Certification Date: 12/11/2009

Nicholas Tepovich - Metallurgic Lab Manager