## **Material Test Report**

Heat Code: HAU .

An Ameri-Forge Group Company 13770 Industrial Rd. Houston, TX 77015

Line: 6

ISO 9001:2000 Certified

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

PLESA ANAHUAC Y CIAS SA DE CV AV. VALLE DE LAS ALAMEDAS 66-0

Sales Order: 74164 PO: 7995 item Code: 0302400100-0020F Qty Shipped: 20

Item Desc: FLG 04.00 0300 SO RF

Supplier Heat: 3008258 Supplier: CMC 54940 TULTITLAN, EDO, MEX

Spec: ASTM A105/A105M-(05)/ASME SA 105/SA 105M-(08a) Section II Part A

ent (	%wt)	Ladle	Product	EPCR	A CAS#	Elen	ent	(%wt)	Ladle	Product	EPCRA	CAS#
		0.22				Cr	Chromi	um	0.14		✓ 7	440-47-3
		0.95		✓	7439-96-5	Mo	Molybo	ienum	0.04			
-		0.009				v	Vanadi	um	0.002			
•		0.017				ರರ	Columb	ium	0.003			
•		0.25				C.E.			0.44			
		0.24		✓	7440-50-8	CuN	CrMo		0.52			
		0.11		✓	7440-02-0	CrMc	)		0.18			
MICKEL		0.11					-					
	Carbon Manganese	Carbon Manganese Phosphorous Sulphur Silicon Copper	Carbon         0.22           Manganese         0.95           Phosphorous         0.009           Sulphur         0.017           Silicon         0.25           Copper         0.24	Carbon         0.22           Manganese         0.95           Phosphorous         0.009           Sulphur         0.017           Silicon         0.25           Copper         0.24	Carbon 0.22  Manganese 0.95  Phosphorous 0.009  Sulphur 0.017  Silicon 0.25  Copper 0.24  ✓	Carbon 0.22  Manganese 0.95	Carbon 0.22  Manganese 0.95	Carbon         0.22         Cr Chromd           Manganese         0.95         ✓ 7439-96-5         Mo Molybe           Phosphorous         0.009         V Vanadi           Sulphur         0.017         Cb Columb           Silicon         0.25         C.E.           Copper         0.24         ✓ 7440-50-8         CuNiCrMo	Carbon       0.22       Cr Chromium         Manganese       0.95       ✓ 7439-96-5       Mo Molybdenum         Phosphorous       0.009       V Vanadium         Sulphur       0.017       Cb Columbium         Silicon       0.25       C.E.         Copper       0.24       ✓ 7440-50-8       CuNiCrMo	Carbon         0.22         Cr Chromium         0.14           Manganese         0.95         ✓ 7439-96-5         Mo Molybdenum         0.04           Phosphorous         0.009         V Vanadium         0.002           Sulphur         0.017         Cb Columbium         0.003           Silicon         0.25         C.E.         0.44           Copper         0.24         ✓ 7440-50-8         CuNicrMo         0.52	Carbon 0.22 Cr Chromium 0.14  Manganese 0.95 ✓ 7439-96-5 Mo Molybdenum 0.04  Phosphorous 0.009 V Vanadium 0.002  Sulphur 0.017 Cb Columbium 0.003  Silicon 0.25 C.E. 0.44  Copper 0.24 ✓ 7440-50-8 CuNiCrMo 0.52	Carbon 0.22 Cr Chromium 0.14 7  Manganese 0.95 7439-96-5 Mo Molybdenum 0.04  Phosphorous 0.009 V Vanadium 0.002  Sulphur 0.017 Cb Columbium 0.003  Silicon 0.25 C.E. 0.44  Copper 0.24 7440-50-8 CuNiCrMo 0.52

Mechanical T	esting		Other			
Test Lab Test Bar Size HBW Elg (%) RA (%) Tensile Specimen Size (in) Tensile (ksi)	AFG TEST PIECE 174 - 174 30.0 61.0 .249	MILI MHC Country of Origin EF Fully Killed	CMC-TEXAS 3008258 USA (US) Y Y			
Yield (ksi) Gauge Length	51.1	PLEASA ANAHUAC Y	CONTROL DE CALIDAD			
		HISTORIA COMM	br 2010_			
		FIRMA E.	RUIZ			

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.:

180737

Certification Date:

4/6/2010

Nicholas Tepovich - Metallurgic Lab Manager

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