



# Material Test Report

Heat Code: HVR

ISO 9001:2008 Certified

An Ameri-Forge Group Company  
 13770 Industrial Rd. Houston, TX 77015  
 Sales: (713) 868-4421 Fax: (713) 455-8368

PLESA ANAHUAC Y CIAS	PO: 9545	Sales Order: 90421	Line: 5
SA DE CV AV. VALLE DE LAS	Item Code: 0152400100-0020F		Qty Shipped: 180
ALAMEDAS 66-0	Item Desc: FLG 04.00 0150 SO RF		
54940 TULTITLAN, EDO, MEX	Supplier: CMC	Supplier Heat: 3018141	
Spec: ASTM A105/A105M-(10)/ASME SA 105/SA 105M-(08a) Section II Part A			

Element	(%wt)	Ladle	Product	EPCRA	CAS#	Element	(%wt)	Ladle	Product	EPCRA	CAS#
C	Carbon	0.19				Cr	Chromium	0.06		✓	7440-47-3
Mn	Manganese	1.07		✓	7439-96-5	Mo	Molybdenum	0.02			
P	Phosphorous	0.008				V	Vanadium	0.002			
S	Sulphur	0.014				Cb	Columbium	0.001			
Si	Silicon	0.22				C.E.		0.39			
Cu	Copper	0.23		✓	7440-50-8	CuNiCrMo		0.231			
Ni	Nickel	0.09		✓	7440-02-0	CrMo		0.081			

Mechanical Testing				Other			
Test Lab		AFG		MILL		CMC-TEXAS	
Test Bar Size		Test Piece		MHC		3018141	
HBW		163 - 163		EF		Y	
Elg (%)		38.0		Fully Killed		Y	
RA (%)		63.0					
Tensile Specimen Size (in)		.249					
Tensile (ksi)		80.0					
Yield (ksi)		48.5					
Gauge Length		1					

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. No weld repair performed on this product. Product compliant with and meets all requirements of ASTM A105 and with dimensions to ASME B16.5 Product compliant with NACE MR0175, latest edition

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.: 196501  
 Certification Date: 12/16/2010

Nicholas Tepovich - Metallurgical Lab Manager