



Material Test Report

Heat Code: zxs

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: 5177	Sales Order: 66675	Line: 13
SA DE CV AV. VALLE DE LAS	Item Code: 0603800100-0021F		Qty Shipped: 15
ALAMEDAS 66-0	Item Desc: FLG 08.00 0600 BL RF A105 NRM COFFR		
54940 TULTITLAN, EDO MEX	Supplier: CMC		Supplier Heat: 261973
Spec: ASTM A 105/A 105M-(05)/ASME SA 105/SA 105M-(08a) Section II Part A - Normalized			

Element	(%wt)	Ladle	Product	EPCRA	CAS#	Element	(%wt)	Ladle	Product	EPCRA	CAS#
C	Carbon	0.19				Ni	Nickel	0.11		✓	7440-02-0
Mn	Manganese	0.89		✓	7439-96-5	Cr	Chromium	0.17		✓	7440-47-3
P	Phosphorous	0.011				Mo	Molybdenum	0.031			
S	Sulphur	0.019				V	Vanadium	0.001			
Si	Silicon	0.190				Cb	Columbium	0.002			
Cu	Copper	0.24		✓	7440-50-8	C.E.		0.40			

Mechanical					Heat Treat				
Test Lab		AFG			Norm. Temp. (F)		1675		
Test Bar Size		SACRIFICIAL PIECE			Norm. (Hrs)		4.0		
HBW		156-156			Norm. Cooling Type		AIR		
Elg (%)		29.0			Norm. Location		AFG		
RA (%)		51.0							
Tensile Specimen Size (in)		0.497							
Tensile (ksi)		74.6							
Yield (ksi)		44.6			Country of Origin		USA (US)		
Gauge Length		2.00			EF		Y		

Product compliant with NACE MR0175, latest edition and dimensions to ANSI B16.5
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.: 154946
Certification Date: 12/1/2008

Nicholas Tepovich - Metallurgic Lab Manager