

## **Material Test Report**

Heat Code: GTG

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

Normalized

ISO 9001:2000 Certified

 PLESA ANAHUAC Y CIAS
 PO: 6849
 Sales Order: 70840
 Line: 11

 SA DE CV AV. VALLE DE LAS
 Item Code: 0601800102-0021F
 Qty Shipped: 3

 ALAMEDAS 66-0
 Item Desc: FLG 08.00 0600 WN RF XH

 54940 TULTITLAN, EDO, MEX
 Supplier: CMC
 Supplier Heat: 3006402

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

Mn         Manganese         0.89         ✓ 7439-96-5         Cr         Chromium         0.06         ✓ 74           P         Phosphorous         0.005         Mo         Molybdenum         0.022           S         Sulphur         0.020         V         Vanadium         0.003           Si         Silicon         0.190         Cb         Columbium         0.003	EPCRA CAS#	EPCF	Product	Ladle	(%wt)	ment	E	A CAS#	EPCR	Product	Ladle	(%wt)	nent	Elen
P         Phosphorous         0.005         Mo         Molybdenum         0.022           S         Sulphur         0.020         V         Vanadium         0.003           Si         Silicon         0.190         Cb         Columbium         0.003	√ 7440-02-0	✓		0.08		Nicke	: N				0.20		Carbon	С
S         Sulphur         0.020         V         Vanadium         0.003           Si         Silicon         0.190         Cb         Columbium         0.003	√ 7440-47-3	1		0.06	บพ	Chron	C	7439-96-5	✓		0.89	se	Manganes	Mn
Si Silicon 0.190 Cb Columbium 0.003				0.022	enum	Molyh	, M				0.005	rous	Phosphor	P
				0.003	um	Vanac	V				0.020		Sulphur	S
C) Garage 0.21 / 7440.50.0 C E 0.20467				0.003	ium	Colum	C				0.190		Silicon	Si
Cu copper 0.21 * /440-30-0 : C.E. 0.3040/				0.38467		١.	Ė	7440-50-8	✓		0.21		Copper	Cu

Mechanical T	esting	Heat Treat		
Test Lab	AFG	Norm. Temp. (F)	1675	
Test Bar Size	SACRIFICIAL PIECE	Norm. (Hrs)	4	
HBW	143 - 143	Norm, Cooling Type	AIR	
Elg (%)	36	Norm. Location	AFG	
RA (%)	58			
Tensile Specimen Size (in)	. 496	O	ther	
Tensile (ksi)	73.7	MILL	CMC	
Yield (ksi)	44.1	мнс	3006402	
Gauge Length	2	VD	Υ	
		EF	Y	
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		:		

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.:

169516

Certification Date:

8/10/2009

Nicholas Tepovich - Metallurgic Lab Manager

Vialadas Jep