



Material Test Report

Heat Code: AXM

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: 4801	Sales Order: 65670	Line: 1
SA DE CV AV. VALLE DE LAS	Item Code: 0152200800-0020F		Qty Shipped: 10
ALAMEDAS 66-0	Item Desc: FLG 02.00 0150 SO LJ		A105 NHT COFFR
54940 TULTITLAN, EDO MEX	Supplier: CMC	Supplier Heat: 3002786	
Spec: ASME SA-105/SA-105M 2004 Section II/ASTM A105/A105M-03			

Element	(%wt)	Ladle	Product	EPCRA	CAS#	Element	(%wt)	Ladle	Product	EPCRA	CAS#
C	Carbon	0.22				Cr	Chromium	0.13		✓	7440-47-3
Mn	Manganese	0.91		✓	7439-96-5	Mo	Molybdenum	0.029			
P	Phosphorous	0.014				V	Vanadium	0.002			
S	Sulphur	0.021				Cb	Columbium	0.003			
Si	Silicon	0.20				C.E.		0.426			
Cu	Copper	0.24		✓	7440-50-8	CuNiCrMo		0.49			
Ni	Nickel	0.09		✓	7440-02-0	CrMo		0.16			

Mechanical			Other		
Test Lab		AFG	Country of Origin		USA (US)
Test Bar Size		SACRIFICIAL PIECE			
HBW		163-163			
Elg (%)		32.0			
RA (%)		60.0			
Tensile Specimen Size (in)		0.498			
Tensile (ksi)		75.6			
Yield (ksi)		43.7			
Gauge Length		2.00			

Product compliant with NACE MRO175, latest edition.
 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.: 145351
 Certification Date: 7/9/2008

Puneet Sagar
 Puneet Sagar - Plant Metallurgist