



Material Test Report

Heat Code: RW862

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: 5101	Sales Order: 66536	Line: 26
SA DE CV AV. VALLE DE LAS	Item Code: 0301920101-0021F		Qty Shipped: 1
ALAMEDAS 66-0	Item Desc: FLG 20.00 0300 WN RF STD A105 NRM COFFR		
54940 TULTITLAN, EDO MEX	Supplier: ROLLWELL	Supplier Heat: RW862	
Spec: ASTM A 105/A 105M-03/ASME SA 105/SA 105M-05 Normalized			

Element	(%wt)	Ladle	Product	EPCRA	CAS#	Element	(%wt)	Ladle	Product	EPCRA	CAS#
C	Carbon	0.18				Ni	Nickel	0.01		✓	7440-02-0
Mn	Manganese	0.95		✓	7439-96-5	Cr	Chromium	0.01		✓	7440-47-3
P	Phosphorous	0.016				Mo	Molybdenum	0.010			
S	Sulphur	0.011				V	Vanadium	0.010			
Si	Silicon	0.220				C.E.		0.34			
Cu	Copper	0.01		✓	7440-50-8						

Mechanical				Heat Treat			
Test Lab		ROLLWELL		Norm. Temp. (F)		1670	
Test Bar Size		SACRIFICIAL PIECE		Norm. (Hrs)		4.0	
HBW		156-168		Norm. Cooling Type		AIR	
Elg (%)		32.0					
RA (%)		54.8					
Tensile Specimen Size (in)		0.500		Country of Origin		INDIA	
Tensile (ksi)		89.5					
Yield (ksi)		46.6					
Gauge Length		2.00					

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.: 152565
 Certification Date: 10/23/2008

Nicholas Tepovich

 Nicholas Tepovich - Metallurgic Lab Manager