



# Material Test Report

Heat Code: HXS

An Ameri-Forge Group Company

13770 Industrial Rd. Houston, TX 77015

ISO 9001:2008 Certified

Sales: (713) 868-4421 Fax: (713) 455-8366

PLESA ANAHUAC Y CIAS SA DE CV AV. VALLE DE LAS ALAMEDAS 66-0 54940 TULTITLAN, EDO, MEX	PO: 9216	Sales Order: 89436	Line: 13
	Item Code: 0601910101-0021F		Qty Shipped: 5
	Item Desc: FLG 10.00 0600 WN RF STD		
	Supplier: MACSTEEL		Supplier Heat: 4M74557
Spec: ASTM A105/A105N-(10)/ASME SA 105/SA 105N-(08a) Section II Part A - Normalized			

Element	(%wt)	Ladle	Product	EPCRA	CAS#	Element	(%wt)	Ladle	Product	EPCRA	CAS#
C	Carbon	0.20				Ni	Nickel	0.06		✓	7440-02-0
Mn	Manganese	1.06		✓	7439-96-5	Cr	Chromium	0.13		✓	7440-47-3
P	Phosphorous	0.020				Mo	Molybdenum	0.01			
S	Sulphur	0.008				V	Vanadium	0.005			
Si	Silicon	0.19				Cb	Columbium	0.001			
Cu	Copper	0.18		✓	7440-50-8	C.E.		0.42			

Mechanical Testing					Heat Treat				
Test Lab	AFG				Norm. Temp. (F)	1675			
Test Bar Size	TEST PIECE				Norm. (Hrs)	4			
HBW	146 - 146				Norm. Cooling Type	AIR			
Elg (%)	31				Norm. Location	AFG			
RA (%)	63				<b>Other</b>				
Tensile Specimen Size (in)	.217								
Tensile (ksi)	77.5								
Yield (ksi)	48.3								
Gauge Length	1				MILL	MACSTEEL			
					MHC	4M74557			

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. No welding performed.

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.: 193014  
 Certification Date: 10/25/2010

Nicholas Tepovich - Metallurgic Lab Manager