Material Test Report

Heat Code: HXS

ISO 9001:2008 Certified

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

PLESA ANAHUAC Y CIAS	PO: 9216	Sales Order: 89436	Line: 13
SA DE CV AV. VALLE DE LAS	Item Code: 0601910101-0021F	Qty Shipped: 5	
ALAMEDAS 66-0	Item Desc: FLG 10.00 0600 WN RF STD		
54940 TULTITLAN, EDO, MEX	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#
C	Carbon	0.20			
Mn	Manganese	1.06		✓	7439-96-5
P	Phosphorous	0.020			
S	Sulphur	0.008			
Si	Silicon	0.19			
Cu	Copper	0.18		✓	7440-50-8
Ni	Nickel	0.06		✓	7440-02-0
Cr	Chromium	0.13		✓	7440-47-3
Mo	Molybdenum	0.01			
V	Vanadium	0.005			
Cb	Columbium	0.001			
C.E.		0.42			

Mechanical Testing

Test Lab	AFG
Test Bar Size	TEST PIECE
HBW	146 - 146
Elg (%)	31
RA (%)	63
Tensile Specimen Size (in)	.217
Tensile (ksi)	77.5
Yield (ksi)	48.3
Gauge Length	1

Heat Treat

Norm. Temp. (F)	1675
Norm. (Hrs)	4
Norm. Cooling Type	AIR
Norm. Location	AFG

Other

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

This report is issued in compliance with the requirements of EN10204 3.1 / ISO 10474 3.1.b

Nicholas Tepovich - Metallurgic Lab Manager