



# Material Test Report

Heat Code: VUF

An Ameri-Forge Group Company

13770 Industrial Rd. Houston, TX 77015

ISO 9001:2008 Certified

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

PLESA STEEL INC. 5100 WESTHEIMER ROAD SUITE 200 Houston, TX 77056	PO: 99	Sales Order: 125620	Line: 7
	Item Code: 0601910180-0021F		Qty Shipped: 30
	Item Desc: FLG 10.00 0600 WN RF 80		
	Supplier: GERDAU		Supplier Heat: 4M86200
Spec: ASTM A105/A105N-(12)/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	0.10		✓	7440-02-0
Mn	Manganese	1.04		✓	7439-96-5	Cr	Chromium	0.16		✓	7440-47-3
P	Phosphorous	0.018				Mo	Molybdenum	0.02			
S	Sulphur	0.010				V	Vanadium	0.006			
Si	silicon	0.19				Cb	Columbium	0.001			
Cu	Copper	0.14		✓	7440-50-8	C.E.		0.43			

Mechanical Testing				Heat Treat			
Test Lab	AFG			Norm. Temp. (F)	1675		
Test Bar Size	Sacrificial Piece			Norm. (Hrs)	4		
HBW	159 - 159			Norm. Cooling Type	AIR		
Elg (%)	32			Norm. Location	AFG		
RA (%)	61			Other MILL GERDAU MHC 4M86200			
Tensile Specimen Size (in)	.501						
Tensile (ksi)	78.7						
Yield (ksi)	49.4						
Gauge Length	2						

Product compliant with NACE MR0175 / ISO 15156 and NACE MR0103 / ISO 15156 latest edition and dimensions to ANSI B16.5 - 2009

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. Yield strength was determined using the .2% offset method. 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. Made in USA.

No welding performed.

AmeriForge manufactures materials according to a certified Quality Management System conforming to ISO 9001:2008 and in compliance to PED 97/23/EC, Section 4.3

Tensile Testing Per ASTM E8; Brinell Hardness Per ASTM E10

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.: 272761

Certification Date: 7/16/2013

Mandar Hingwe - Dir. of Quality and Metallurgy