

# Material Test Report

Heat Code: VDO

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

ISO 9001:2008 Certified

PLESA STEEL INC. 12700 NORTHBOROUGH DR STE 646 Houston, TX 77067	PO: 205	Sales Order: 134975	Line: 11
	Item Code: 0301800101-0020F		Qty Shipped: 20
	Item Desc: FLG 08.00 0300 WN RF STD		
	Supplier: GERDAU		Supplier Heat: 4M84470
Spec: ASTM A105/A105M-(12)/ASME SA 105/SA 105M-(13) Section II Part A			

Element	(%wt)	Ladle	Product	EPCRA	CAS#	Element	(%wt)	Ladle	Product	EPCRA	CAS#
C	Carbon	0.18				Cr	Chromium	0.16		✓	7440-47-3
Mn	Manganese	1.08		✓	7439-96-5	Mo	Molybdenum	0.02			
P	Phosphorous	0.014				V	Vanadium	0.003			
S	Sulphur	0.004				Cb	columbium	0.001			
Si	silicon	0.18				C.E.		0.41			
Cu	Copper	0.18		✓	7440-50-8	CuNiCrMo		0.450			
Ni	Nickel	0.09		✓	7440-02-0	CrMo		0.160			

Mechanical Testing				Other			
Test Lab	AFG			MILL	GERDAU		
Test Bar Size	SACRIFICIAL PIECE			MHC	4M84470		
HBW	152 - 152			Country of Origin	USA		
Elg (%)	33						
RA (%)	67						
Tensile Specimen Size (in)	.494						
Tensile (ksi)	75.9						
Yield (ksi)	44.0						
Gauge Length	2						

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  
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 weld repair performed on this product.  
Product compliant with NACE MR0175 / ISO 15156 latest edition and dimensions to ASME B16.5 - 2013  
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.: 298383  
Certification Date: 4/17/2014

*M. Hingwe*  
Mandar Hingwe - Dir. of Quality and Metallurgy