



Material Test Report

Heat Code: VOA

An Amen-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: 82	Sales Order: 122004	Line: 6
	Item Code: 0151300102-0020F		Qty Shipped: 100
	Item Desc: FLG 03.00 0150 WN RF XH		
	Supplier: CMC		Supplier Heat: 3037157

Spec: ASTM A105/A105M-(12)/ASME SA 105/SA 105M-(08a) Section II Part A

Element	(%wt)	Ladle	Product	EPCRA	CAS#	Element	(%wt)	Ladle	Product	EPCRA	CAS#
C	Carbon	0.18				Cr	Chromium	0.08		✓	7440-47-3
Mn	Manganese	0.97		✓	7439-96-5	Mo	Molybdenum	0.03			
P	Phosphorous	0.011				V	Vanadium	0.002			
S	Sulphur	0.025				Cb	Columbium	0.000			
Si	Silicon	0.24				C.E.		0.39			
Cu	Copper	0.25		✓	7440-50-8	CuNiCrMo		0.447			
Ni	Nickel	0.09		✓	7440-02-0	CrMo		0.107			

Mechanical Testing				Other			
Test Lab		AFG		:MILL		CMC-TEXAS	
Test Bar Size		Sacrificial Piece		:MHC		3037157	
HBW		170 - 170		:Country of Origin		USA	
Elg (%)		32		:EF		Y	
RA (%)		57		:DESC:		P91072-00802-13	
Tensile Specimen Size (in)		.496		:DESC2:		LINE 47	
Tensile (ksi)		80.5					
Yield (ksi)		46					
Gauge Length		2					

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.

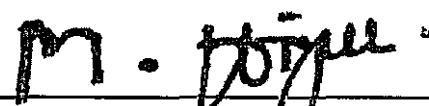
Product compliant with NACE MR0175 / ISO 15156 latest edition and dimensions to ANSI 816.5 - 2009

Tensile Testing Per ASTM E8; Brinell Hardness Per ASTM E10

Forged in USA

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.: 263699
 Certification Date: 3/25/2013


 Mandar Hingwe - Dir. of Quality and Metallurgy