

# Material Test Report

Heat Code: WTO

An Amerl-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: 3
	Item Code: 0152200100-0020F		Qty Shipped: 100
	Item Desc: FLG 02.00 0150 SO RF		
	Supplier: ASW Steel Inc.		Supplier Heat: 76487
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	0.19				Cr	Chromium	0.12		✓	7440-47-3
Mn	Manganese	1.07		✓	7439-96-5	Mo	Molybdenum	0.04			
P	Phosphorous	0.008				V	Vanadium	0.003			
S	Sulphur	0.001				Cb	Columbium	0.005			
Si	Silicon	0.27				C.E.		0.42			
Cu	Copper	0.22		✓	7440-50-8	CuNiCrMo		0.475			
Ni	Nickel	0.10		✓	7440-02-0	CrMo		0.155			

Mechanical Testing				Other	
Test Lab		AFG		MILL	ASW STEEL
Test Bar Size		SACRIFICIAL PIRCE		MHC	76487
HBW		170 - 170		Country of Origin	CANADA
Elg (%)		32.0			
RA (%)		65.0			
Tensile Specimen Size (in)		.496			
Tensile (ksi)		82.0			
Yield (ksi)		47.4			
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.: 298373  
Certification Date: 4/17/2014

  
Mandar Hingwe - Dir. of Quality and Metallurgy