

# Material Test Report

Heat Code: ZVB

Coffer Corp.

An AFGlobal Company

13770 Industrial Rd. Houston, TX 77015

ISO 9001:2008 Certified

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

PLESA STEEL INC. 5100 WESTHEIMER RD STE 200 Houston, TX 77056	00012015	PO: 392	Sales Order: 148435	Line: 8
		Item Code: 0301300102-0020F		Qty Shipped: 20
		Item Desc: FLG 03.00 0300 WN RF XH A105 NHT COFFR		
		Supplier: CMC	Supplier Heat: 3052698	
Spec: ASTM A105/A105M-(14)/ASME SA 105/SA 105M-(15) Section II Part A				

Element	(%wt)	Ladle	Product	EPCRA	CAS#	Element	(%wt)	Ladle	Product	EPCRA	CAS#
C	Carbon	0.19				Cr	Chromium	0.15		✓	7440-47-3
Mn	Manganese	0.98		✓	7439-96-5	Mo	Molybdenum	0.02			
P	Phosphorous	0.012				V	Vanadium	0.001			
S	Sulphur	0.020				Cb	Columbium	0.000			
Si	Silicon	0.22				C.E.		0.41			
Cu	Copper	0.25		✓	7440-50-8	CuNiCrMoV		0.502			
Ni	Nickel	0.08		✓	7440-02-0	CrMo		0.171			

Mechanical Testing				Other			
Test Lab	AFG	EF					Y
Test Bar Size	SACRIFICIAL PIECE	Fully Killed					Y
HBW	167 - 170						
Elg (%)	29						
RA (%)	55						
Tensile Specimen Size (in)	.490						
Tensile (ksi)	82.5						
Yield (ksi)	48.3						
Gauge Length	2						

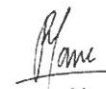
Product compliant with NACE MR0175 / ISO 15156 latest edition and flange dimensions to ASME B16.5 - 2013

- \* No Weld repair performed.
- \* Ladle Chemical Analysis results are reported from the raw material suppliers MTR.
- \* Tensile taken from a round specimen. Measurement of elongation after fracture.
- \* 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.
- \* When reported on MTR: Tensile Testing Per ASTM E8; Brinell Hardness Per ASTM E10; Charpy Testing Per ASTM E23
- \* AF Global manufactures materials according to a certified Quality Management System conforming to ISO 9001:2008 and PED 97/23/EC, Annex 1, Section 4.3

The recording of false, fictitious, or fraudulent statement or entries on this document may be punishable as a felony under federal statute.

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.: 1223426  
 Certification Date: 9/15/2015  
 Issued By: John Saucedo



Rina Sane - Metallurgical Lab Manager

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