

Material Test Report

Coffer Corp.
An AFGlobal Company
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Heat Code: 29866

ISO 9001:2008 Certified

PLESA STEEL INC. 00012015	PO: 442	Sales Order: 156017	Line: 1
5100 WESTHEIMER RD STE 200	Item Code: 0603920100-P021F	Qty Shipped: 2	
Houston, TX 77056	Item Desc: FLG 20.00 0600 BL RF A105	NRM COFFR	
Supplier: MF RINGS		Supplier Heat: 29866	
Spec: ASTM A105/A105N-(14)/ASME SA 105/SA 105N-(15) Section II Part A - Normalized			

Element	(%wt)	Ladle	Product	EPCRA	CAS#	Element	(%wt)	Ladle	Product	EPCRA	CAS#
C	Carbon	0.22				Mo	Molybdenum	0.000			
Mn	Manganese	0.95		✓	7439-96-5	V	Vanadium	0.00			
P	Phosphorous	0.024				Cb	Columbium	0.000			
S	Sulphur	0.008				B	Boron	0.000			
Si	Silicon	0.25				C.E.		0.38			
Cu	Copper	0.01		✓	7440-50-8	CuNiCrMoV		0.036			
Ni	Nickel	0.01		✓	7440-02-0	CrMo		0.01			
Cr	Chromium	0.01		✓	7440-47-3						

Mechanical Testing		Heat Treat	
Test Lab	SUPPLIER	Norm. Temp. (F)	1652
Test Bar Size	SACRIFICIAL PIECE	Norm. (Hrs)	5
HBW	156 - 156	Norm. Cooling Type	AIR
Elg (%)	29.6		
RA (%)	58.2	Other	Y
Tensile Specimen Size (in)	.500		Y
Tensile (ksi)	73.5	EF	
Yield (ksi)	47.1	Fully Killed	
Gauge Length (in)	2		

Product compliant with NACE MR0175/ISO 15156-2:2009 Annex A (A.2.1.2, A2.1.3).
Product compliant with NACE MR0103-2012, Section 2.1.2 and 2.1.4.

- * 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, unless otherwise specified.
- * 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 2014/68/EU, Annex 1, Section 4.3

Unless otherwise noted on PO, Dimensions of all standard pipe flanges and flange fittings (NPS 1/2 to NPS 24) per ASME B16.5-2013, large diameter steel flanges (NPS 26 to 60) per ASME B16.47-2011, Orifice flanges per ASME B16.36-2015, Steel pipeline flanges (NPS 1/2 to 60) per MSS SP-44.

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 312. 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.: 1260816
 Certification Date: 10/17/2016
 Issued By: John Saucedo

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

Rina Sane - Metallurgical Lab Manager