

Material Test Report

Heat Code: ARX
ISO 9001:2008 Certified
Sales Order: 155907
Line: 1

Coffer Corp.
An AFGlobal Company
13770 Industrial Rd. Houston, TX 77015
Sales: (713) 868-4421 Fax: (713) 455-8366

PLESA STEEL INC. 00012015	PO: 441	Sales Order: 155907	Line: 1
5100 WESTHEIMER RD STE 200	Item Code: 0303400100-0020F	Qty Shipped: 5	
Houston, TX 77056	Item Desc: FLG 04.00 0300 BL RF A105	NHT COFFER	
Supplier: CMC		Supplier Heat: 3062170	
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	0.20				Cr	Chromium	0.08			7440-47-3
Mn	Manganese	0.99		✓	7439-96-5	Mo	Molybdenum	0.01		✓	
P	Phosphorous	0.012				V	Vanadium	0.001			
S	Sulphur	0.010				Cb	Columbium	0.001			
Si	Silicon	0.20				C.E.		0.40			
Cu	Copper	0.22		✓	7440-50-8	CuNiCrMoV		0.374			
Ni	Nickel	0.06		✓	7440-02-0	CrMo		0.093			

Mechanical Testing		Other	
Test Lab	AFG	BF	Y
Test Bar Size	SACRIFICIAL PIECE	Fully Killed	Y
HBW	159 - 170		
Elg (%)	32		
RA (%)	53		
Tensile Specimen Size (in)	.247		
Tensile (ksi)	80.8		
Yield (ksi)	46.6		
Gauge Length (in)	1		

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

- * 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 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.: 1260046
 Certification Date: 10/7/2016
 Issued By: John Saucedo

Rina Sane - Metallurgical Lab Manager