



An AFG Holdings Company

Material Test Report

Heat Code: AL4

ISO 9001:2015 Certified

Coffer Corp.

An AFGlobal Company

13770 Industrial Rd. Houston, TX 77015

Sales: (713) 393-4200

15181	PO: 301849-00	Sales Order: 183982S	Line: 69
	Item Code: 0152300100-0020F	Qty Shipped: 200	
	Item Desc: FLG 03.00 0150 SO RF A105 NHT COFFR		
	Mill Heat: 3107523		
Spec: ASTM A105/A105M-(21)/ASME SA 105/SA 105M-(21) Section II Part A			

Element	(%wt)	Ladle	Product	EPCRA	CAS#	Element	(%wt)	Ladle	Product	EPCRA	CAS#
C	Carbon	0.19				Mo	Molybdenum	0.03			
Mn	Manganese	1.06		Y	7439-96-5	V	Vanadium	0.000			
Mn:C		5.6				Cb	Columbium	0.000			
P	Phosphorous	0.008				B	Boron	0.0001			
S	Sulphur	0.020				Al	Aluminum	0.003			
Si	Silicon	0.24				C.E.		0.41			
Cu	Copper	0.25		Y	7440-50-8	CuNiCrMoV		0.436			
Ni	Nickel	0.10		Y	7440-02-0	CrMo		0.086			
Cr	Chromium	0.06		Y	7440-47-3						

Mechanical Testing				Other	
Test Lab	AFG	Country of Melt	USA		
Test Bar Size	SACRIFICIAL PIECE	Country of Finish Machining	USA		
HBW	156 - 163	Grain Size	8.5		
Elg (%)	32				
RA (%)	57				
Tensile Specimen Size (in)	.494				
Tensile (ksi)	79.5				
Yield (ksi)	45.2				
Gauge Length (in)	2				

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.: 1438409

Certification Date: 10/5/2021

Issued By: Griselda Galvin

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Spec: ASTM A105/A105M-(21)/ASME SA 105/SA 105M-(21) Section II Part A			

Material is Fully Killed; Met Fine Grain Practice - Per SA-20 Paragraph 8.3

Product compliant with NACE MR0175/ISO 15156-2:2015, 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 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
- * AFGlobal manufactures materials according to a certified Quality Management System conforming to ISO 9001:2015 and PED certified to 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 B16.5-2020, large diameter steel flanges (NPS 26 to 60) per ASME B16.47-2020, Orifice flanges per ASME B16.36-2020.
- * AFGlobal uses the latest edition of ASTM E29 (Standard practice for using significant digits in test data to determine conformance with specifications), to claim conformance or nonconformance to a specification. When a accept/reject determination is required AFGlobal uses a test uncertainty ratio (TUR) of 1:1 or higher as acceptable.
- * Accreditation: ISO/IEC 17025:2017 & A2LA Certificate # 2162.01
- * DNV-GL PED Certificate No 10000425664-PA-ACCREDIA-USA Valid thru December 03, 2023.

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Griselda Galvin - Technical Coordinator

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