Material Test Report

Heat Code: 85286

An Ameri-Forge Group Company 13770 Industrial Rd. Houston, TX 77015 Sales: (713) 868-4421 Fax: (713) 455-8366

ISO 9001:2008 Certified

PLESA ANAHUAC Y CIAS PO: 10589 Sales Order: 95732 SA DE CV AV. VALLE DE LAS Item Code: 0151924102-0021F Qty Shipped: ALAMEDAS 66-0 Item Desc: FLG 24.00 0150 WN RF XH 54940 TULTITLAN, EDO, MEX Supplier: MELESI Supplier Heat: 85286

Spec: ASTM A105/A105N-(10)/ASME SA 105/SA 105N-(08a) Section II Part A - Normalized

nent (%wt)	Ladle	Product	EPCR	A CAS#	Elem	ent	(%wt)	Ladle	Product	EPCR/	A CAS#
Carbon	0.18				Ni	Nickel		0.08		1	7440-02-0
Manganese	1.15		✓	7439-96-5	Cr	Chromiu	m	0.04		✓	7440-47-3
Phosphorous	0.008				Mo	Molybde	num	0.020			
Sulphur	0.015				v	Vanadiu	m	0.015			
Silicon	0.230				Cb	Columbi	um	0.001			
Copper	0.27		✓	7440-50-8	C.E.			0.41			
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	Carbon Manganese Phosphorous Sulphur Silicon	Carbon 0.18 Manganese 1.15 Phosphorous 0.008 Sulphur 0.015 Silicon 0.230	Carbon 0.18 Manganese 1.15 Phosphorous 0.008 Sulphur 0.015 Silicon 0.230	Carbon 0.18 Manganese 1.15 Phosphorous 0.008 Sulphur 0.015 Silicon 0.230	Carbon 0.18 Manganese 1.15 ✓ 7439-96-5 Phosphorous 0.008 Sulphur 0.015 Silicon 0.230	Carbon 0.18 Ni Manganese 1.15 ✓ 7439-96-5 Cr Phosphorous 0.008 Mo Sulphur 0.015 V Silicon 0.230 Cb	Carbon 0.18 Ni Nickel Manganese 1.15 7439-96-5 Cr Chromiu Phosphorous 0.008 Mo Molybde Sulphur 0.015 V Vanadiu Silicon 0.230 Cb Columbi	Carbon 0.18 Ni Nickel Manganese 1.15 ✓ 7439-96-5 Cr Chromium Phosphorous 0.008 Mo Molybdenum Sulphur 0.015 V Vanadium Silicon 0.230 Cb Columbium	Carbon 0.18 Ni Nickel 0.08 Manganese 1.15 7439-96-5 Cr Chromium 0.04 Phosphorous 0.008 Mo Molybdenum 0.020 Sulphur 0.015 V Vanadium 0.015 Silicon 0.230 Cb Columbium 0.001	Carbon 0.18 Ni Nickel 0.08 Manganese 1.15 7439-96-5 Cr Chromium 0.04 Phosphorous 0.008 Mo Molybdenum 0.020 Sulphur 0.015 V Vanadium 0.015 Silicon 0.230 Cb Columbium 0.001	Carbon 0.18 Ni Nickel 0.08 ✓ Manganese 1.15 ✓ 7439-96-5 Cr Chromium 0.04 ✓ Phosphorous 0.008 Mo Molybdenum 0.020 Sulphur 0.015 V Vanadium 0.015 Silicon 0.230 Cb Columbium 0.001

Mechanical To	esting	Heat T	reat
Test Lab	MELESI	Norm. Temp. (F)	1652
Test Bar Size	SACRIFICIAL PIECE	Norm. (Hrs)	.5 HR PER INCH
HBW	155 - 157	Norm. Cooling Type	AIR
Elg (%)	31.0	Norm. Location	MELESI
RA (%)	63.0		
Tensile Specimen Size (in)	0.498	Othe	91
Tensile (ksi)	75.9	VD	Y
Yield (ksi)	48.1	EF	Y
Gauge Length	2	•	
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Product compliant with NACE MR0175 and NACE MR0103 latest edition and dimensions to ANSI B16.5. 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. 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. Yield strength was determined using the 0.2% offset method. No welding performed.

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 EPCRÁ Section 313.

Certification No.:

209220

Certification Date:

5/26/2011

Nicholas Tepovich - Metallurgic Lab Manager

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