



Material Test Report

→ Heat Code: CGN

ISO 9001:2000 Certified

An Amer-Forge Group Company
 13770 Industrial Rd. Houston, TX 77015
 Sales: (713) 868-4421 Fax: (713) 455-8368

PLESA ANAHUAC Y CIAS SA DE CV AV. VALLE DE LAS ALAMEDAS 66-0 54940 TULTITLAN, EDO, MEX	PO: 6649	Sales Order: 70253	Line: 4
	Item Code: 0152400100-0020F		Qty Shipped: 140
	Item Desc: FLG 04.00 0150 SO RF		
	Supplier: KOPPEL	Supplier Heat: 462685	
Spec: ASTM A105/A105M-(05)/ASME SA 105/SA 105M-(08a) Section II Part A			

Element	(%wt)	Ladle	Product	EPCRA	CAS#	Element	(%wt)	Ladle	Product	EPCRA	CAS#
C	Carbon	0.19				Cr	Chromium	0.17		✓	7440-47-3
Mn	Manganese	0.85		✓	7439-96-5	Mo	Molybdenum	0.04			
P	Phosphorous	0.009				V	Vanadium	0.003			
S	Sulphur	0.008				Cb	Columbium	0.001			
Si	Silicon	0.23				C.E.		0.40027			
Cu	Copper	0.27		✓	7440-50-8	CuNiCrMo		0.6			
Ni	Nickel	0.12		✓	7440-02-0	CrMo		0.21			

Mechanical Testing				Other			
Test Lab	AFG			MILL	KOPPEL		
Test Bar Size	SACRIFICIAL PIECE			MHC	462685		
HBW	149 - 149			VD	Y		
Elg (%)	35			EF	Y		
RA (%)	66						
Tensile Specimen Size (in)	.248						
Tensile (ksi)	79.6						
Yield (ksi)	46.8						
Gauge Length	2						

Product compliant with NACE MR0175 / ISO 15156, latest edition and dimensions to ANSI B16.5
 Product compliant with and meets all requirements of ASTM A105/ASME SA105, latest edition.
 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.

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.: 167945
 Certification Date: 6/30/2009

Nicholas Tepovich - Metallurgic Lab Manager



Material Test Report

→ Heat Code: GJA

ISO 9001:2000 Certified

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

PLESA ANAHUAC Y CIAS	PO: 6649	Sales Order: 70253	Line: 20
SA DE CV AV. VALLE DE LAS	Item Code: 0152200100-0020F		Qty Shipped: 100
ALAMEDAS 66-0	Item Desc: FLG 02.00 0150 SO RF		
54940 TULTITLAN, EDO, MEX	Supplier: CMC	Supplier Heat: 3006172	
Spec: ASTM A105/A105M-(05)/ASME SA 105/SA 105M-(08a) Section II Part A			

Element	(%wt)	Ladle	Product	EPCRA	CAS#	Element	(%wt)	Ladle	Product	EPCRA	CAS#
C	Carbon	0.23				Cr	Chromium	0.08		✓	7440-47-3
Mn	Manganese	0.90		✓	7439-96-5	Mo	Molybdenum	0.02			
P	Phosphorous	0.009				V	Vanadium	0.003			
S	Sulphur	0.011				Cb	Columbium	0.001			
Si	silicon	0.21					C.E.	0.4182			
Cu	Copper	0.21		✓	7440-50-8		CuNiCrMo	0.37			
Ni	Nickel	0.06		✓	7440-02-0		CrMo	0.10			

Mechanical Testing				Other			
Test Lab	AFG	MILL	CMC				
Test Bar Size	SACRIFICIAL PIECE	MHC	3006172				
HBW	163 - 163	VD	Y				
Elg (%)	33	EF	Y				
RA (%)	66						
Tensile Specimen Size (in)	.495						
Tensile (ksi)	81.5						
Yield (ksi)	46.7						
Gauge Length	2						

Product compliant with NACE MR0175 / ISO 15156, latest edition and dimensions to ANSI B16.5
 Product compliant with and meets all requirements of ASTM A105/ASME SA105, latest edition.
 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.

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.: 167943
 Certification Date: 6/30/2009

Nicholas Tepovich

 Nicholas Tepovich - Metallurgic Lab Manager



Material Test Report

→ Heat Code: XCL

An Ameri-Forge Group Company
13770 Industrial Rd., Houston, TX 77015

ISO 9001:2000 Certified

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

PLESA ANAHUAC Y CIAS SA DE CV AV. VALLE DE LAS ALAMEDAS 66-0 54940 TULTITLAN, EDO MEX	PO: 3815	Sales Order: 62636	Line: 7
	Item Code: 0302300100-0020f		Qty Shipped: 25
	Item Desc: FLG 03.00 0300 SO RF		A105 NHT COFFR
	Supplier: SMI		Supplier Heat: 252690

Spec: ASTM A 105/A 105M-03/ASME SA 105/SA 105M-04, Melt Practice EF

Element	(%wt)	Ladle	Product	EPCRA	CAS#	Element	(%wt)	Ladle	Product	EPCRA	CAS#
C	Carbon	0.21				Cr	Chromium	0.09		✓	7440-47-3
Mn	Manganese	0.90		✓	7439-96-5	Mo	Molybdenum	0.020			
P	Phosphorous	0.006				V	Vanadium	0.002			
S	Sulphur	0.015				Cb	Columbium	0.001			
Si	Silicon	0.20				C.E.		0.406			
Cu	Copper	0.27		✓	7440-50-8	CuNiCrMo		0.46			
Ni	Nickel	0.08		✓	7440-02-0	CrMo		0.11			


Mechanical			Other		
Test Lab	AFG	Country of Origin	USA (US)		
Test Bar Size	SACRIFICIAL PIECE	EF	Y		
HBW	170-170				
Elg (%)	29.0				
RA (%)	60.0				
Tensile Specimen Size (in)	0.248				
Tensile (ksi)	78.9				
Yield (ksi)	45.2				
Gauge Length	1.00				

Material on this report is certified to NACE MR-01-75 and DIMS. to ANSI B16.5
Product compliant with NACE MRO175, latest edition.

Product compliant with and meets all requirements of ASTM A105/ASME SA105-05.
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.

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.: 131285
Certification Date: 12/11/2007


Kevin Papich - Tech. Svcs. Manager



Material Test Report

→ Heat Code: GYV

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

ISO 9001:2000 Certified

PLESA ANAHUAC Y CIAS SA DE CV AV. VALLE DE LAS ALAMEDAS 66-0 54940 TULTITLAN, EDO, MEX	PO: 6251	Sales Order: 69338	Line: 8
	Item Code: 0156400100-0020F		Qty Shipped: 30
	Item Desc: FLG 04.00 0150 TH RF		
	Supplier: CMC		Supplier Heat: 3008248

Spec: ASTM A105/A105M-(05)/ASME SA 105/SA 105M-(08a) Section II Part A

Element	(%wt)	Ladle	Product	EPCRA	CAS#	Element	(%wt)	Ladle	Product	EPCRA	CAS#
C	Carbon	0.19				Cr	Chromium	0.07		✓	7440-47-3
Mn	Manganese	0.90		✓	7439-96-5	Mo	Molybdenum	0.03			
P	Phosphorous	0.005				V	Vanadium	0.001			
S	Sulphur	0.016				Cb	Columbium	0.002			
Si	Silicon	0.23				C.E.		0.38			
Cu	Copper	0.19		✓	7440-50-8	CuNiCrMo		0.38			
Ni	Nickel	0.09		✓	7440-02-0	CrMo		0.10			

Mechanical Testing				Other			
Test Lab		afg		MILL			CMC-TEXAS
Test Bar Size		Sacrificial Flange		MHC			3008248
HBW		149 - 156					
Elg (%)		31.0					
RA (%)		60.0					
Tensile Specimen Size (in)		.247					
Tensile (ksi)		78.5					
Yield (ksi)		44.3					
Gauge Length		1					

Product compliant with NACE MR0175 / ISO 15156, latest edition and dimensions to ANSI B16.5
 Product compliant with and meets all requirements of ASTM A105/ASME SA105, latest edition.
 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.

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.: 165565
 Certification Date: 4/24/2009

Nicholas Tepovich - Metallurgic Lab Manager



Material Test Report

→ Heat Code: GLX

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

ISO 9001:2000 Certified

PLESA ANAHUAC Y CIAS SA DE CV AV. VALLE DE LAS ALAMEDAS 66-0 54940 TULTITLAN, EDO, MEX	PO: 6251	Sales Order: 69338	Line: 12
	Item Code: 0302600100-0020F		Qty Shipped: 15
	Item Desc: FLG 06.00 0300 SO RF		
	Supplier: CMC		Supplier Heat: 3006226

Spec: ASTM A105/A105M-(05)/ASME SA 105/SA 105M-(08a) Section II Part A

Element	(%wt)	Ladle	Product	EPCRA	CAS#	Element	(%wt)	Ladle	Product	EPCRA	CAS#
C	Carbon	0.18				Cr	Chromium	0.07		✓	7440-47-3
Mn	Manganese	0.94		✓	7439-96-5	Mo	Molybdenum	0.02			
P	Phosphorous	0.007				V	Vanadium	0.002			
S	Sulphur	0.024				Cb	Columbium	0.001			
Si	Silicon	0.18				C.E.		0.37507			
Cu	Copper	0.22		✓	7440-50-8	CuNiCrMo		0.39			
Ni	Nickel	0.08		✓	7440-02-0	CrMo		0.09			

Mechanical Testing				Other			
Test Lab		AFG		MILL		CMC	
Test Bar Size		SACRIFICIAL PIECE		MHC		3006226	
HBW		146 - 146		EF		Y	
Elg (%)		33					
RA (%)		60					
Tensile Specimen Size (in)		.248					
Tensile (ksi)		73.7					
Yield (ksi)		41.8					
Gauge Length		1					

Product compliant with NACE MR0175 / ISO 15156, latest edition and dimensions to ANSI B16.5
 Product compliant with and meets all requirements of ASTM A105/ASME SA105, latest edition.
 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.

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.: 165570
 Certification Date: 4/24/2009

Nicholas Tepovich - Metallurgic Lab Manager

CLIENTE / Customer / Client
PESA ANAHUAC Y GAS, S.A.C.V.
 AV. VALLE DE LAS ALAMEDAS, 66-0
 COL. SAN FRANCISCO CHILPAN
 84940 TULITLAN-EDO. DE MEXICO

CERTIFICADO DE INSPECCION
 Works Certificate - Certificat d'Usine
 N° 102838
 FECHA: 13/10/2005
 DIN 50049 / 3.1 B
 EN 10204 / 3.1 B
 ISO 10474 / 3.1 B




HOJA: 1
 Page: 1
 N°: 922164


ULMA FORSA S.COOP.
 Br. Zuloaga, 3 - Apdo. 14
 20560 ORATI (Gipuzkoa) SPAIN
 Tel.: 34 - 843 780552
 Tel.: 34 - 843 781808
 E-mail: forsa@orping.ulma.es

PRODUCTO: BRIDAS
 Article - Product: SU PEDIDO N°: 79 (11.07.05)
 Your Order No. Your Order No.
 NORMAS APPLICABLES: ASME B16.3-96
 Requirements - Normes Applicables: Vols. Cde. N°:

MATERIAL CORRESPONDIENTE: ASTM A1028-03
 Material Correspondent - Qualité: ASME SA1028
 MODO DE FUSION: NACE MR-01-75/03
 Steel Making - Elaboration de l'acier: E = EMB; Y = Oxígeno básico

DE: 12072005
 of - de

Certified acc. PED 97/23/EC
 by TÜV Rheinland
 N° 01 202 EQ 02 7443
 MARCA DEL FABRICANTE: 
 Mark of factory: 
 MARQUE du fabricant: 
 DEPARTAMENTO: GARANTIA CALIDAD
 Section: Department

PARTIDA Item Poste	CANTIDAD Quantity	DESCRIPCION Description	OBSERVACIONES Remarks Observations	COLADA N° Heat No N°Coulée	RESISTENCIA Tensile Yield Point Min/2	LONGITUD Length Min/2	ALARGUE Elongation %	RESISTENCIA Reduktion A %	RESILENCIA Impact test Joules	MEZCLA Average Min/2	TEMPERATURA °C	DUREZA Hardness Dureté HB
2	490	SO 2 300LB RF A1028N	NE	188A5	503	312	32.00	65.30				148
3	5	SO 14 300LB RF A1028N	NE	175A5	513	320	31.80	65.00				150
4	100	WN 2 300LB S80 RF A1028N	NE	250A5	513	317	33.00	66.80				150
5	70	WN 3 150LB S80 RF A1028N	NE	243A5	514	318	31.80	63.00				151
6	25	WN 2 1/2 150LB S80 RF A1028N	NE	202A5	520	318	32.70	65.90				151
8	5	WN 2 1/2 150LB S80 RF A1028N	NE	447A4	520	318	32.00	66.30				151

COMPOSICION QUIMICA - STEEL MARKER'S - ANALYSE CHIMIQUE

COLADA N° Heat No N°Coulée	C %	SI %	Mn %	P %	S %	Cr %	Ni %	Mo %	Nb %	V %	Cu %	CEO %
175A5	0.180	0.230	0.830	0.010	0.003	0.090	0.080	0.030	0.007	0.001	0.240	0.364
188A5	0.219	0.210	0.810	0.017	0.007	0.010	0.009	0.003	0.001	0.001	0.190	0.358
202A5	0.180	0.230	0.870	0.015	0.004	0.100	0.110	0.020	0.007	0.001	0.400	0.383
243A5	0.180	0.260	0.850	0.012	0.003	0.100	0.150	0.040	0.007	0.001	0.250	0.377
250A5	0.180	0.240	0.850	0.011	0.008	0.090	0.080	0.020	0.007	0.002	0.230	0.385
447A4	0.180	0.270	0.840	0.019	0.007	0.210	0.220	0.070	0.007	0.005	0.390	0.418

- Les dimensions y le condition superficial se hallaron satisfactorios
 - Dimension and surface condition were found acceptable
 - Les dimensions et états de surface sont satisfaisants
 - Los materiales citados cumplen las normas aplicables
 - Manufacturing requirements are satisfied
 - Les normes applicables sont respectées
 EL INSPECTOR
 Works Inspector - L'inspecteur

REMARKS: N NORMALIZADO A 900 C Y ENFRIADO EN AIRE EN CALMA
 Observations

