



Material Test Report

Heat Code: UTT

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

ISO 9001:2000 Certified
 Sales. (713) 393-4200 Fax. (713) 455-8366

PLESA ANAHUAC Y CIAS	PO: 1345	Sales Order: 54360	Sales Ord Line: 4
SA DE CV AV. VALLE DE LAS TULTITLAN, EDO, MEX 54940	Part Desc: FLG 24.00 0150 SO RF / A105 NHT COFFR		
	Part No: 0152924100-0020F		Qty Shipped: 25
	Vendor: MACSTEEL		Vendor Heat Code: 4M55424
Spec: ASTM A 105/A 105M-03/ASME SA 105/SA 105M-04, Melt Practice EF			

	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb
Ladle:	0.18	0.89	0.011	0.012	0.20	0.24	0.08	0.12	0.020	0.003	0.001
Product:											
	C.E.	CuNiCrMo	CrMo								
Ladle:	0.378270	0.46	0.14								
Product:											

Mechanical Properties	Heat Treatment	Other Results
Test Lab AFG		Country of Origin USA (US)
Test Bar Size SACRIFICIAL		EF Y
BHN 163-167		
Elg (%) 34.0		
RA (%) 65.0		
Tensile Specimen Size 0.503		
Tensile (ksi) 72.1		
Yield (ksi) 44.3		
Gauge Length 2.00		

Comments

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.
 Product compliant with NACE MRO175, latest edition.
 Product compliant with and meets all requirements of ASTM A105/ASME SA105-05.

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

MTR No. 88985
 MTR Date. 5/9/2006

S. Drozdowski
 Stan Drozdowski - AFG Test Lab Manager