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

Element	(%wt)	Ladle	Product	EPCRA	CAS#
C	Carbon	0.20			
Mn	Manganese	0.82		✓	7439-96-5
P	Phosphorous	0.015			
S	Sulphur	0.020			
Si	Silicon	0.16			
Cu	Copper	0.31		✓	7440-50-8
Ni	Nickel	0.16		✓	7440-02-0

Element	(%wt)	Ladle	Product	EPCRA	CAS#
Cr	Chromium	0.15		✓	7440-47-3
Mo	Molybdenum	0.04			
V	Vanadium	0.000			
Cb	Columbium	0.001			
C.E.		0.406			
CuNiCrMo		0.66			
CrMo		0.19			

Mechanical Testing

Test Lab	AFG
Test Bar Size	SACRIFICIAL PIECE
HBW	163 - 163
Elg (%)	23
RA (%)	33
Tensile Specimen Size (in)	.245
Tensile (ksi)	80.5
Yield (ksi)	47.9
Gauge Length	1

Other

MILL	NUCOR
MHC	JW08109482
EF	Y

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.: 166820

Certification Date: 5/28/2009

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

Nicholas Tepovich - Metallurgic Lab Manager