

834894



CERTIFIED MATERIAL TEST REPORT

CERTIFICATE OF CONFORMANCE

Bill To: 9668060
ROLLED ALLOYS INC
125 W STERNS RD
P O BOX 310
TEMPERANCE MI

Ship To: 458
ROLLED ALLOYS, LP
6555 S. 57TH W. AVE
TULSA OK

48182

74131

OUR ORDER NO. LP1437100
YOUR ORDER NO. S05293
MEMO NO. 377411-01
CERT. DATE 10/29/2011
WHS-1 DUAL CERT - REV

Tracy McFall

Tracy McFall - Director, Corporate Quality Assurance

AL 316/316L HRAP
ASTM A262 10 PRACTICE E ASIM A240 10b ASME SA240 10
AMS 5507 F AMS 5524 L
UNS S31600; UNS S31603;
NACE MR0175

Heat Matl ID Slip Sid Lot No Size(Inches) Pcs Weight(lb)
834894 01A 25252 A 246682 1.1250 x 79.0000 x 260.0000 1 6868

Heat C MN P S SI NI CR MO CO CU N
834894 .022 1.38 .033 .0002 .29 10.09 16.12 2.02 .30 .43 .062

Lot No Gauge Cond. Trans ANNEAL Yield Strength 35.5 KSI Tensile Strength 81.0 KSI Elong % 62.0 Red. of Area % 82.0 Hardness BHN147 Bend Corrosion Size OK Grain

MATERIAL WAS SOLUTION ANNEALED (HEAT TREATED) ABOVE 1900F AND WATER QUENCHED
MATERIAL WAS PRODUCED WITHOUT KNOWN CONTACT WITH MERCURY
MATERIAL IS OF USA MELT AND MANUFACTURE
MATERIAL WAS NOT WELD REPAIRED
DIN EN 10204:2005 3.1 CERTIFICATE
THIS MATERIAL DOES NOT HAVE A CONTINUOUS CARBIDE NETWORK

TRACER # 239528
REVISED

ROLLED ALLOYS QUALITY ASSURANCE
APPROVED *Kevin...*
DATE 10-31-11

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THIS CERTIFICATE OF TEST SHALL NOT BE REPRODUCED IN FULL WITHOUT THE WRITTEN APPROVAL OF THE COMPANY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULANT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. TESTING WAS PERFORMED AT ALC NADCAP AND ISO/IEC 17025 APPROVED LABORATORIES LOCATED AT MATRONA HEIGHTS, BRACKENRIDGE, LATROBE, MIDLAND AND LEICHBURG, PA FACILITIES OR A NADCAP AND ISO/IEC 17025 ACCREDITED LABORATORY. EN 10204-3.1 ALLEGHENY LUDLUM IS APPROVED AS MANUFACTURER ACCORDING TO AD-MERKBLATT W04700 100 AND THE PRESSURE EQUIPMENT DIRECTIVE PED 97/23/EC.
ALLEGHENY LUDLUM PERFORMS CHEMICAL ANALYSIS BY THE FOLLOWING TECHNIQUES: C, S BY COMBUSTION/INFRARED. N, O, H BY INERT FUSION/THERMAL CONDUCTIVITY. Mn, P, Si, Cr, Ni, Mo, Cu, V BY WDXRF. B BY OES. AL AND Ti (>= 0.01%) BY WDXRF. OTHERWISE BY OES. Pb, Bi, Ag BY GRAV.
CERTIFICATE OF TEST & CHEMISTRY STATEMENTS EXCEPT AS OTHERWISE NOTED, MATERIAL WAS MANUFACTURED AND TESTED IN ACCORDANCE WITH THE LISTED SPECIFICATIONS AND RESULTS CONFORM TO SPECIFICATION/ORDER REQUIREMENTS.