



CERTIFIED MATERIAL TEST REPORT

CERTIFICATE OF CONFORMANCE

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

721908

Ship To: 163
ROLLED ALLOYS INC
9818 EAST HARDY ROAD
HOUSTON TX

48182

77093

OUR ORDER NO. LP6136280
YOUR ORDER NO. J08458
MEMO NO. 290488-01
CERT. DATE 10/14/2011
WHS-1 DUAL CERT - REV

Tracy McFarland

Tracy McFarland - Director, Corporate Quality Assurance

AL 304/304L HRAP
ASTM A240-05 ASME SA-240-04 AMS 5511H (304L UNS S30403)
AMS 5513H (304 UNS S30400)
NACE MR0175

Heat Matl ID Slip Sid Lot No Size(Inches) Pcs Weight(lb)
721908 08189 A 169937 3.0000 x 72.0000 x 134.0000 1 8459

Heat C MN P S SI NI CR MO CO CU N
721908 .015 1.39 .03 .0002 .40 8.08 18.22 .44 .22 .42 .09

Lot No Gauge Cond. Cond. Test Yield Strength Tensile Strength Elong % Red. of Area % Hardness Bend Corrosion Grain Size
169937 3.0000 40.0 KSI 87.0 KSI 61.0 81.0 BHN163 OK

MATERIAL WAS SOLUTION ANNEALED (HEAT TREATED) ABOVE 1900F AND WATER QUENCHED
MATERIAL WAS PRODUCED WITHOUT KNOWN CONTACT WITH MERCURY
MATERIAL WAS NOT WELD REPAIRED
MATERIAL IS OF USA MELT AND MANUFACTURE
EN 10204:2004 3.1 CERTIFICATE

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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 NATRONA HEIGHTS, BRACKENRIDGE, LATROBE, MIDLAND AND LEECHBURG, 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 WO/TRD 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, CB, CO, V BY WDXRF. B BY OES. AL AND TI (>= 0.10%) BY WDXRF, OTHERWISE BY OES. PB, BI, AG BY GFAA. 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.