



CERTIFIED MATERIAL TEST REPORT

CERTIFICATE OF CONFORMANCE

517577T01 (13")

New West 1076722 W05592 C/A 10F0E40

CERT. DATE 02/24/2012
WHS-1 REVISION

Tracy McFarland

Tracy McFarland - Director, Corporate Quality Assurance

AL 400 HRAP
ASTM B127 05 ASME SB127 A08
UNS N04400; NACE MR0175 / ISO 15156-3 2009
QQ-N-281 D AM. 2 CLASS A FORM 6

Monel 400

*du
with
2/16/12*

Cut to 13" OD

Heat 517577T01 Matl ID 01 Slip 10052 Sid AA Lot No 243591 *Thick* Size(Inches) 2.5000 x 72.0000 x 72.0000 Pcs 1 Weight(lb) 4205 PART# 1-053002500

Heat 517577T01 C MN P S SI NI CU FE AL PB SN ZN CO
.111 .96 .004 .0001 .10 64.54 32.03 1.84 .33 .001 .001 .002 .027

Lot No 243591 Gauge 2.5000 Cond. TRANS Cond. Test ANNEAL Yield Strength 41.7 KSI Tensile Strength 77.5 KSI Elong % 47.0 Red. of Area % 75.0 Hardness BHN146 Bend Corrosion Grain Size

MATERIAL WAS ELECTRIC ARC FURNACE MELTED, AOD REFINED, AND ELECTROSLAG REMELTED
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
MATERIAL WAS ANNEALED ABOVE 1350F

COPY

*SV
MC*

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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.