



Allegheny Technologies  
 Ship ROLLED ALLOYS  
 To 125 W STERNS RD  
 TEMPERANCE MI

500 Green Street  
 Washington, PA 15301

948966

CERTIFIED MATERIAL  
 TEST REPORT  
 CERTIFICATE OF CONFORMANCE

ROLLED ALLOYS INC  
 125 W STERNS RD  
 P O BOX 310  
 TEMPERANCE MI

OUR ORDER NO. MD1442600  
 YOUR ORDER NO. TB0493  
 MEMO NO. 378771-00 DUAL CERT  
 DATE 08/16/2011  
 SALESMAN NO. 424

*Tracy McFarland*  
 Tracy McFarland - Director, Corporate Quality Assurance

Roller Alloys PO 76597 W05559 CIA 47-6 600 48182

AL 316/316L HRAP  
 ASTM A240 11a ASME SA240 10 ASTM A262 10 PRACTICE E  
 AMS 5507 F AMS 5524 L  
 NACE MR0175; NACE MR0103;  
 UNS S31600; UNS S31603

*ok  
 11/16/11*

TRACER # Below

Heat	Matl ID	Slip	Sid	Lot No	Size(Inches)	Pcs	Weight(lb)
833808	10	71405	AB	243662	.2500 x 96.0000 x 240.0000	1	1798 From Slip 10193 AB M 24240
833808	10	71406	AA	243662	.2500 x 96.0000 x 240.0000	1	1798 M 242412
948966	40	71218	ABA	243320	.2500 x 96.0000 x 240.0000	1	1798 From Slip 10120 ABA M 24243
948966	40	71219	AAD	243320	.2500 x 96.0000 x 240.0000	1	1798 M 242414
948966	40	71220	ABC	243320	.2500 x 96.0000 x 240.0000	1	1798 M 242414
948966	40	71221	AAC	243320	.2500 x 96.0000 x 240.0000	1	1798 M 242415
948966	40	71222	AAB	243320	.2500 x 96.0000 x 240.0000	1	1798 M 242416
948966	40	71223	ABB	243320	.2500 x 96.0000 x 240.0000	1	1798 M 242417 ← * <i>ok</i>
948966	40	71223	ABB	243320	.2500 x 96.0000 x 240.0000	1	1798 M 242418

Heat	C	MN	P	S	SI	NI	CR	MO	CO	CU	N
833808	.023	1.43	.033	.0001	.35	10.10	16.16	2.06	.40	.44	.066
948966	.018	1.58	.033	.0003	.37	10.06	16.22	2.03	.42	.47	.065

Lot No	Gauge	Cond.	Cond. Test	Yield Strength	Tensile Strength	Elong %	Red. of Area %	Hardness	Bend	Corrosion	Grain Size
243662	.2500	TRANS	ANNEAL	42.3 KSI	83.0 KSI	60.0	66.0	BHN158	OK	OK	
243320	.2500	TRANS	ANNEAL	52.5 KSI	86.5 KSI	55.0	59.0	BHN167	OK	OK	

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

PAGE 1 CONTINUE ON PAGE 2

*SV  
 MC*

THIS CERTIFICATE OF TEST SHALL NOT BE REPRODUCED IN FULL WITHOUT THE WRITTEN APPROVAL OF THE COMPANY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT 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 STATEMENT & CHEMISTRY STATEMENT EXCEPT AS OTHERWISE NOTED, THIS MATERIAL HAS BEEN MANUFACTURED AND TESTED IN ACCORDANCE WITH THE LISTED SPECIFICATIONS AND RESULTS CONFORM TO THE SPECIFICATION AND ORDER REQUIREMENTS.



Ship ROLLED ALLOYS  
To 125 W STERNS RD  
TEMPERANCE MI

500 Green Street  
Washington, PA 15301

CERTIFIED MATERIAL  
TEST REPORT  
CERTIFICATE OF CONFORMANCE

ROLLED ALLOYS INC  
125 W STERNS RD  
P O BOX 310  
TEMPERANCE MI

48182

48182

MATERIAL WAS NOT WELD REPAIRED  
DIN EN 10204:2005 3.1 CERTIFICATE  
THIS MATERIAL DOES NOT HAVE A CONTINUOUS CARBIDE NETWORK

OUR ORDER NO. MD1442600 Page 2  
YOUR ORDER NO. T80493  
MEMO NO. 378771-00 DUAL CERT  
DATE 08/16/2011  
SALESMAN NO. 424

*Tracy McFarland*  
Tracy McFarland - Director, Corporate Quality Assurance

ROLLED ALLOYS QUALITY ASSURANCE  
APPROVED *Tracy McFarland*  
DATE 8-19-11

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