
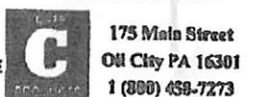


# 52452

PO281621

<b>MATERIAL CERTIFICATION REPORT and CERTIFICATION OF QUALITY CONFORMANCE</b>		<b>Print Date Time</b> 15-Nov-2012 15:11	<b>Ship Note</b> 120885
		<b>NEW WEST METALS INC</b>	
175 Main Street OH City PA 16301 1 (800) 459-7273		<b>Certification ID</b> 140487-1	<b>Sales Order</b> 115161

**Grade:** EC400  
**Specification:** Type 400 (UNS N04400) - ASTM B164-03 (reapproved 2008), QQ-N-281D (Class A, Amend. 2), ASME SB-164 2010 Edition, ASTM B564-11, ASME SB564 2010 Edition  
**Mercury Free, No Weld Repair Allowed. Ultrasonically inspected per MIL-STD-271F CH. 1, T9074-AS-GIB-010/271 accepted to QQ-N-281D(2), NACE MR0175-99.**  
**Condition:** HOT ROLLED / HOT FORGED, ANNEALED  
**Finish:** ROUGH TURNED

Sales Order	Quantity	Heat	Lot ID	Weight	Size	Customer Mark
115161-9	1	52452	52452-4AA	1,675 LB	Diam: 6.5570 in; Length: 155.7500 in	
115161-9	1	52452	52452-4AB	1,676 LB	Diam: 6.5550 in; Length: 155.8700 in	

Lot	Test	Result	Low Limit	High Limit	
<b>SPECIFICATION RESULTS</b>					<b>ROCKWELL B</b>
<b>FINAL LADLE CHEMISTRY FOR AIRMELT</b>					<b>52452-4AA (th)</b>
52452	Co	0.03	0.00	0.20	68
52452	Ni	64.24	63.00	70.00	64
52452	C	0.121	0.000	0.200	200
52452	Mn	0.92	0.00	2.00	
52452	P	0.008	0.000	0.020	
52452	S	0.001	0.000	0.015	
52452	Si	0.32	0.00	0.50	
52452	NICO	64.27	63.00	70.00	
52452	Fe	1.01	0.00	2.50	
52452	Al	0.10	0.00	0.50	
52452	Pb	0.0030	0.0000	0.0060	
52452	Sn	0.002	0.000	0.006	
52452	Zn	< 0.01	0.00	0.02	
52452	Cu	32.93	28.00	34.00	
<b>PASS / FAIL TESTS</b>					
52452-4AA	UT Insp	PASS			
52452-4AA	No Welds	PASS			
<b>TENSILE</b>					
52452-4AA	LT (PSI)	80910	70000	400000	
<b>.2% YIELD OFFSET</b>					
52452-4AA	LT (PSI)	34670	25000	100000	
<b>ELONGATION 4D</b>					
52452-4AA	LT (%)	44.77	35	100	

The recording of false, fictitious, or fraudulent statements or entries on this document may be punishable as a felony under Federal Statute.  
 The above are true and correct results of tests on samples of the material. Results conform to the specification(s) listed above and are on record.  
 At time of shipment, items and/or material produced under this order have not come into contact with Mercury or its compounds.



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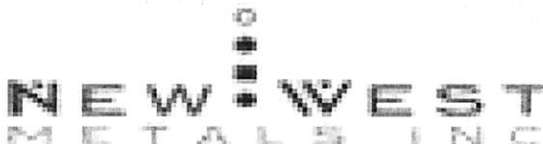
**MATERIAL CERTIFICATION REPORT and  
CERTIFICATION OF QUALITY CONFORMANCE**



ELECTRALLOY  
G. O. CARLSON PLATE



175 Main Street  
OH City PA 16301  
1 (800) 458-7273



Print Date Time

15-Nov-2012 15:11

Certification ID

140487-1

Ship Note

120885

Sales Order

115161

The highlighted result values for "ROCKWELL B" represent values reported outside the limits of the specification/purchase order requirements.

**Quality Statements:**

ASTM E1019-08, ASTM E2465-06 and ASTM E305-07 are the methods used to determine the chemical analysis for Ni Base Alloys utilizing XRF, OES, Combustion and Fusion Methods. This material is guaranteed capable of passing Ultrasonic Testing in accordance with the above specification.

Compliant with DFARS 252.225-7014 Alt. 1. Preference for Domestic Specialty Metals

HWRR - 12.6:1 from a 25"x25" square ingot.

Heat 52452-4AA qualifies 4AB.

Heat Treatment - Solution annealed for 30 minutes per inch of diameter plus 30 minutes @ 1425F (+/-25F), then air cooled.

Material Certification conforms to Certificate 3.1 as in EN 10204:2010

Material represented was melted and manufactured in the USA

Material represented was not weld repaired.

Material represented was produced in accordance with the Electralloy Quality Control Program dated 06/07/2011, which meets the requirements of ISO9001(2008), MIL-I-45208A including Amendment 1 and ASME Code Section 3, Subsection NCA 3800.

Material was not exposed to Radium or other radioactive materials while at our facility.

Melting and Refining Source - Electralloy

Method of manufacture - Electric Arc Furnace, AOD refined.

Rockwell B value is reported for information only and not a reasonable basis for rejection.

The mechanical tests have been performed at Modern Industries, Materials Research Division located at 613 West 11th Street Erie, PA 16512-0399

At time of shipment, items and/or material produced under this order have not come in contact with Mercury or its compounds.

Meets EU Electrical "RoHS". Contains NO "WEEE" relevant substances. Complies with DFARS-225.1-Buy American Act-Supplies. HWRR = Minimum Hot Working Reduction Ratio. Electralloy only accepts residual and trace elements to the limits invoked by the specification and or customer. This document shall not be reproduced, except in full, without the written approval of Electralloy / GOC Plate. We hereby affirm that the reported results on this certification are correct and accurate. All tests and results and operations performed by (Electralloy/G.O. Carlson Plate) or its subcontractors are in compliance with the applicable material/customer specification(s).

Name: Bart Plyler

Title: QC Technician

By: 

The parties agree that when title transfers for the products subject to this agreement, or when the products are delivered to purchaser, whichever occurs first, responsibility for the submission of any required export or re-export licenses or related export control approvals for these products also transfers to purchaser. Any export license requirement under any applicable export control statute, regulation, or practice, from any U.S. government agency, including but not limited to the Department of Commerce's Bureau of Industry and Security, the Department of Treasury, Office of Foreign Assets Control, the U.S. Department of State, Directorate of Defense Trade Controls, and the Nuclear Regulatory Commission, are solely the responsibility of the purchaser. Further, purchaser warrants that it will comply with all applicable export and re-export controls related to these products.

The recording of false, fictitious, or fraudulent statements or entries on this document may be punishable as a felony under Federal Statute. The above are true and correct results of tests on samples of the material. Results conform to the specification(s) listed above and are on record. At time of shipment, items and/or material produced under this order have not come into contact with Mercury or its compounds.