



**HUNTINGTON ALLOYS CORPORATION**  
 3200 Riverside Drive, Huntington, West Virginia 25705-1771 USA  
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Certificate No. 59570-00  
 Dated 26-FEB-16  
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**CERTIFIED MATERIALS TEST REPORT**

Note: The recording of false, fictitious or fraudulent statements on entries on this document may be punishable as a felony under federal statute.

This report relates only to the item(s) tested and may not be reproduced except in full.

**Customer**  
 CORROSION MATERIALS INC  
 2262 GROOM RD  
 BAKER  
 LA  
 70714

**Ship To**  
 CORROSION MATERIALS INC  
 2262 GROOM RD  
 BAKER  
 LA  
 70714

<b>Sales Order Number</b>	<b>Purchase Order Number</b>	<b>Mark Order Number</b>	<b>Material Heat / Lot Identity</b>
300035156 / 1.1	PO0040590-B	PO0040590-B	MM6622BG12
			<b>UNS Number</b>
			N04400

**Material Description**

MONEL alloy 400, EAF-AOD-ELECTROSLAG REMELTED, , HOT FIN ROUND, ROUGH T, STRESS RELIEVED, 6.5000, 120.0000-168.0000, IN 3 PCS PC# 121,122,131 5116 LBS

**Specifications**

ASTM B 164-03 (2014)/ ASME SB-164 2013 EDITION/ ASTM B 564-15 CHEMISTRY ONLY/ ASME SB-564 2013 EDITION CHEMISTRY ONLY/ US FED QQ-N-281D AM 2 CL A FM 1 MARKING WAIVED/ NACE MR0175-ISO 15156-3 (2009)/ NACE MR0103-2012.

**ANALYSIS**

	C %	MN %	FE %	S %	SI %	CU %	NI %	AL %	CO %
H	.1	1.2	2.03	.001	.2	31.9	64.2	.1	.03
Method	C/S	ICP	ICP	C/S	ICP	ICP	ICP	ICP	ICP
	P %	PB %	SN %	ZN %					
H	.01	.0003	.001	.001					
Method	ICP	ICP-MS	ICP-MS	ICP-MS					
	NI+CO								
H	64.2								

Heat # MM6622BG12  
  
 Tracer # T0797986



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Method

**ANALYSIS METHOD LEGEND**

ICP - Inductively Coupled Plasma  
 C/S - Carbon/Sulfur

**TENSILE TEST**

**ROOM TEMP TENSILE - LONG|LAB|MECHANICAL**

PIECE TEST TEMPER LOCATION HARDNESS HARD TYPE TENSILE KSI .2% YIELD KSI EFF GA LNTH IN

12	SR	T	83.5	HRB	86.3	46.8	2
----	----	---	------	-----	------	------	---

RED OF AREA% ELONG% ORIENT

72.2	40.6	LONG
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**HEAT TREATMENT**

TREATMENT FURNACE TEMP SCALE TEMP 1 F TEMP 1 HOLD HOLD 1 UNITS CHANGE 1

STR REL	SF1	F	1100	1	HR	AC
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NO WELDING OR WELD REPAIR WAS PERFORMED.

LOCATION LEGEND: B = BACK C = CENTER F = FRONT H = HEAD M = MIDDLE T = TOE

TEST VERDICT LEGEND: P = PASS W = WAIVER

TEST TEMPER LEGEND

SR - Stress relieved

ALL TEST RESULTS ARE REPORTED TO AT LEAST THE REQUIRED PRECISION BY THE ROUNDING METHOD OF ASTM E 29 UNLESS OTHERWISE REQUIRED BY PURCHASE ORDER OR SPECIFICATION.

COUNTRY OF ORIGIN: MELTED AND MANUFACTURED IN THE USA. DFARS PART 252.225.7014 AND 252.225.7008 COMPLIANT.

THIS CERTIFICATION AFFIRMS THAT THE CONTENTS OF THIS REPORT ARE CORRECT AND ACCURATE AND THAT ALL TEST RESULTS AND OPERATIONS PERFORMED BY SPECIAL METALS CORPORATION, INC. OR ITS SUBCONTRACTORS ARE IN COMPLIANCE WITH THE MATERIAL SPECIFICATIONS.

QUALITY SYSTEM MEETS REQUIREMENTS OF DIRECTIVE 97-23/EC (PRESSURE EQUIPMENT DIRECTIVE),

ANNEX 1, CHAPTER 4.3 PER ABS GROUP LTD CERTIFICATE 41734 (EXPIRES JULY 28, 2017).

Heat # MM66228612



Tracer # T0797986



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CERTIFIED MATERIALS TEST REPORT

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HUNTINGTON ALLOYS CORPORATION IS AN ACCREDITED INDEPENDENT NADCAP MATERIALS TESTING LABORATORY VIA CERTIFICATE NUMBER 3200165734 (EXPIRES APRIL 30, 2018) FOR ALL TESTING SPECIFIED IN THE SCOPE OF ACCREDITATION. MATERIAL PRODUCED UNDER QA SYSTEM DOCUMENTED IN HUNTINGTON ALLOYS CORP QA MANUAL REV. 51, DATED 10/17/2014 QA MANUAL NOT TO IMPLY COMPLIANCE TO ASME SECTION III. COMPLIANCE MUST BE OTHERWISE STATED ON CMTR. QUALITY SYSTEM CERTIFICATION: ISO 9001:2008 (ABS-QE CERT. 30125); EN 10 204/DIN 50049 (TYPE 3.1) LABORATORY IS ACCREDITED TO ISO/IEC 17025:2005 FOR MECHANICAL TESTING AND CHEMICAL ANALYSIS.

VISUAL AND DIMENSIONAL EXAMINATION SATISFACTORY.

MATERIAL, WHEN SHIPPED, IS FREE FROM CONTAMINATION BY MERCURY, RADIUM, ALPHA SOURCE, AND LOW MELTING ELEMENTS.

CHEMICAL ANALYSIS AS REQUIRED FOR CARBON, SULFUR, NITROGEN, OR OXYGEN IS PERFORMED BY COMBUSTION TECHNIQUES.

ALL OTHER REPORTED ELEMENTS ARE ANALYZED BY X-RAY AND/OR EMISSION SPECTROSCOPY."

AUTHORIZED QUALITY CERTIFICATION REPRESENTATIVES:

W.E. BOLEN, D.K. MILLER, K.R. SMITH, V.A. POWELL, S.E. LEER, M. WINSEMIUS K.BORSODI

Heat #  
MM6622BG12  
Tracer #  
T0797986

End Of Certificate

This is to certify that all required samplings inspections and tests have been performed in accordance with the order and specification requirements. The test report represents the actual attributes of the material furnished and the values shown are correct and true. The material described by this certificate is in full compliance with all order and inspection requirements. We hereby certify that the figures given are in accordance with the specified contract requirements.

Signed  
  
For and on behalf of HUNTINGTON ALLOYS CORPORATION  
Authorized Signature

REV. 8/08

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