



7997
HUNTINGTON ALLOYS CORPORATION
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Tel: +1.304.526.5100 Toll-Free in the USA: 1.800.334.4626
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Certificate No. 66588-00

Dated 24-OCT-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

HIGH TEMP METALS
12500 FOOTHILL BLVD
SYLMAR
CA
91342-6038

Ship To

HIGH TEMP METALS
12500 FOOTHILL BLVD
SYLMAR
CA
91342-6038

Sales Order Number

100066513 / 1.1

Purchase Order Number

8913

Mark Order Number

7997

Material Heat / Lot Identity

VX6586AK SL11A

UNS Number

N06625

Material Description

INCONEL alloy 625, VACUUM INDUCTION MELTED-ELECTROSLAG REMELTED, , CR SHEET, COLD ROLLED, ANNEALED, .0205 X 36.0000, 120.0000, IN
174 PCS 4728 LBS

Specifications

SAE AMS 5599G/ ASTM B 443-00 (2014) GR 1/ ASME SB-443 2015 EDITION GR 1/ HONEYWELL EMS 95377
REV D/ GE S-400 (6-03-16)/ GE S-1000 (6-01-16)/ NACE MR0175-ISO 15156-3 (2015)/ NACE
MR0103-2012/ WERKSTOFF 2.4856/ P&W MCLM F-17 REV C/ PWA 300BP/ MARK PER ORDER.

ANALYSIS

	C %	MN %	FE %	S %	SI %	NI %	CR %	AL %	TI %
H	.02	.16	4.34	.0005	.10	59.9	22.30	.15	.24
Method	C/S	ICP	ICP	C/S	ICP	ICP	ICP	ICP	ICP
	CO %	MO %	NB %	TA %	P %				
H	.17	8.83	3.51	.004	.008				
Method	ICP	ICP	ICP	ICP	ICP				



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AL+TI NB+TA
H .39 3.51
Method

ANALYSIS METHOD LEGEND

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

TENSILE TEST

ROOM TEMP TENSILE - TRANS|LAB|MECHANICAL

TEST TEMPER HARDNESS HARD TYPE TENSILE KSI .2% YIELD KSI EFF GA LNTH IN ELONG% ORIENT

AN	89.7	15T	141.6	79.7	2	53	TRANS
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HEAT TREATMENT

TREATMENT	FURNACE	TEMP SCALE	TEMP 1 F	TEMP 1 HOLD	HOLD 1 UNITS	CHANGE 1
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ANN	BAL	F	1900	.07	MIN	AC
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OTHER TESTS

BEND TEST - TRANS|LAB|MECHANICAL

TEST TEMPER TEST VERDICT BEND FACTOR BEND ANGLE CRACK CHECK ORIENT

AN	P	1T	180	NC	TRANS
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GRAIN SIZE MEASUREMENT|LAB|METALLOGRAPHY

TEST TEMPER TEST ORIENT AV GS ASTM NRM or DUP

AN	TRANSVERSE	8	NORMAL
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METRIC DIMS: 0.52MM X 914MM X 3048MM

NO WELD REPAIR HAS BEEN PERFORMED ON THIS MATERIAL.

DODD-FRANK ACT COMPLIANT

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

TEST VERDICT LEGEND: P = PASS W = WAIVER

TEST TEMPER LEGEND

AN - Annealed

INCOLOY®, INCONEL®, MONEL®, NILO®, NIMONIC®, Ni-SPAN-C®, UDIMET®, DURANICKEL®, 601GC®, 625LCF®, 718SPF®, 740H®, 800HT®, 945®, and 945X® are trademarks of the Special Metals group of companies

EF595



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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).

HUNTINGTON ALLOYS CORPORATION IS AN ACCREDITED INDEPENDENT NADCAP MATERIALS TESTING LABORATORY VIA CERTI-
FICATE 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. 52, DATED 02/01/2016
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, K.BORSODI, ROBERT D. DILLE, ROBERT SMITHSON

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.

REV. 8/08

Signed

For and on behalf of HUNTINGTON ALLOYS CORPORATION
Authorized Signature

INCOLOY®, INCONEL®, MONEL®, NILO®, NIMONIC®, NI-SPAN-C®, UDIMET®, DURANICKEL®, 601GC®, 625LCF®,
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Deb Fende
Supervisor Specifications & Order
Verification
3200 Riverside Dr.
Huntington, WV 25705
P (304) 526-5070
dfende@specialmetals.com

November 11, 2016

Re: RECERTIFICATION

Customer: High Temp Metals

This document is to certify that INCONEL alloy 625 sheet and plate supplied to High Temp Metals by SMC Huntington, WV and certified to SAE AMS 5599G also meets the requirements of SAE AMS 5599H except marking and with the following clarification on plate greater than 1.000 inch in nominal thickness: the Certified Material Test Report will not have a statement that the product size is outside the range covered by this specification.

This letter will only apply to CMTR's issued prior to April 1, 2018 due to the requirement for compliance with AS6279 that is effective on that date.

The above information is true and accurate as certified by the person stated below.



Deb Fende
Supervisor Specifications
SMC Huntington