

846972-3A

OUTOKUMPU

Outokumpu Stainless Plate, Inc.

Certificate of Analysis and Tests

208 49A / 142250 / 1

OUR ORDER 0267964 - 01

HEAT & PIECE 846972-3A 04/14/09

SOLD TO:

SHIP TO:

----- YOUR ORDER & DATE -----

142250 3/19/09

----- ITEM DESCRIPTION -----

HEAT & PIECE 846972 - 3A
 WEIGHT 14028
 FINISH 1
 GRADE 316L / 316
 DIMENSIONS 3.250 X 96.000 X 154.000 EXACT
 UNS-S31603 / UNS-S31600

----- SPECIFICATIONS -----

*** MFG IN NEW CASTLE, IN, USA
 AMS 5507F WITH EXCEPTIONS
 ASTM A240-08/ASME SA240 07E08AA
 MELTED ELECTRIC ARC METHOD
 ASTM A167-99(2004)
 ASTM A262-02A PRACTICE E
 ASTM E112-96E2
 OSI ON MAN ED 2 R 1 10-15-02
 REQUIRES PRODUCT ANALYSIS
 NO DETRIMENTAL RADIOACTIVITY
 NO WELD REPAIRS

FROM SLABS IMPORTED FROM BRITAIN
 AMS 5524K WITH EXCEPTIONS
 ASTM A480-08/ASME SA480 07E08AA
 REFINED A.O.D. PROCESS
 ASTM A262-02A PRACTICE A
 ASTM A312-08A CHEM&MECH ONLY
 ASTM A666-05 ANN COND ONLY
 NACE MR0175-2003/ISO 15156
 PROD ANAL IN NEW CASTLE, IN
 NO CRIPPER MARKS

PLATES & TEST PCS SOLUTION ANNEALED @ 1900 DEGREES FAHRENHEIT MINIMUM.
 THEN WATER COOLED OR RAPIDLY COOLED BY AIR
 FREE FROM MERCURY CONTAMINATION AT CURRENT DETECTION LIMITS
 HOT ROLLED, ANNEALED & PICKLED (HRAP)

----- MECHANICAL & OTHER TESTS -----

HARDNESS RB 78
 GRAIN SIZE 4
 YIELD STRENGTH (PSI) 97720
 TENSILE STRENGTH (PSI) 76400
 INTERGRANULAR CORROSION OK
 ELONGATION % IN 2" 57.5
 REDUCTION OF AREA % 66.9

----- CHEMICAL COMPOSITION ----- PRODUCT ANALYSIS -----

CHEMICAL COMPOSITION	PRODUCT ANALYSIS
CARBON (C)	.018
MANGANESE (MN)	1.68
PHOSPHORUS (P)	.038
SULFUR (S)	.001
SILICON (SI)	.33
CHROMIUM (CR)	16.34
NICKEL (NI)	10.08
COBALT (CO)	.25
COPPER (CU)	.43
MOLY (MO)	2.06
NITROGEN (N)	.04
COLUMBIUM (CB)	.008
TITANIUM (TI)	.002
ALUMINUM (AL)	.008
TIN (SN)	.009
TANTALUM (TA)	.002



WE HEREBY CERTIFY THAT THE MATERIAL HEREIN HAS BEEN MADE AND TESTED IN ACCORDANCE WITH THE LISTED SPECIFICATION(S) AND THAT THE RESULTS OF ALL TESTS ARE ACCEPTABLE.

James Doubrman

JAMES DOUBRMAN, QUALITY ASSURANCE MANAGER

Outokumpu Stainless Plate, Inc. CERTIFICATE IN CONFORMANCE WITH EN10204-95 3.1.B/EN10204-2004 3.1
 P.O. Box 370
 New Castle, Indiana 47375

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