

**OUTO
KUMPU**

848362-1A

Outokumpu Stainless Plate, Inc.

Certificate of Analysis and Tests

* RE-CERTIFICATION *

OUR ORDER 0270483 - 19

HEAT & PIECE 848362-1A 07/14/10

SOLD TO: C.F.F. SPECIALTY STEELS INC.
1840 BURLINGTON ST. E.

SHIP TO: CUSTOMER PICK UP
CONTACT NATALIE FAX 905-549-29
OR NHILDEBRANDT@CFFSTAINLESS.C
ONTARIO CN 00000

ONTARIO L8H 3L4 00000

----- YOUR ORDER & DATE -----
C71995 12/17/09

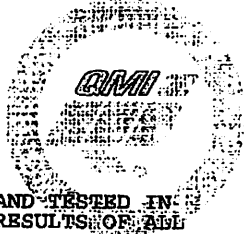
----- ITEM DESCRIPTION -----
HEAT & PIECE 848362 - 1A
WEIGHT 14218
FINISH 1
GRADE 316L / 316
DIMENSIONS 4.000 X 78.000 X 156.000 EXACT
UNS-S31603 / UNS-S31600

----- SPECIFICATIONS -----
*** MFG IN NEW CASTLE, IN, USA FROM SLABS IMPORTED FROM BRITAIN
ASTMA240-09ASMESA240 07E09AD ASTMA480-09ASMESA480 07E09AD
NACE MRO175-2003/ISO 15156 NO GRIPPER MARKS
NO WELD REPAIRS
ASTM A262-02A PRACTICE A ASTM A262-02A PRACTICE E

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 79
GRAIN SIZE 4
YIELD STRENGTH (PSI) 39254
TENSILE STRENGTH (PSI) 79070
INTERGRANULAR CORROSION OK
ELONGATION % IN 2" 55.5
REDUCTION OF AREA % 66.7

----- CHEMICAL COMPOSITION -----
CARBON (C) .014
MANGANESE (MN) 1.68
PHOSPHORUS (P) .025
SULFUR (S) .001
SILICON (SI) .35
CHROMIUM (CR) 16.33
NICKEL (NI) 10.15
COBALT (CO) .50
COPPER (CU) .26
MOLY (MO) 2.05
NITROGEN (N) .04
COLUMBIUM (CB) .018
TITANIUM (TI) .002
ALUMINUM (AL) .011
TIN (SN) .004
TANTALUM (TA) .003



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 DOUBMAN, QUALITY ASSURANCE MANAGER

CERTIFICATE IN CONFORMANCE WITH EN10204-95 3.1.B/EN10204-2004 3.1

James Douberman

Outokumpu Stainless Plate, Inc.
P.O. Box 370
New Castle, Indiana 47382

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