

OUTOKUMPU

Outokumpu Stainless Plate, Inc.

Certificate of Analysis and Tests

OUR ORDER 261755 - 02 DUAL

HEAT & PIECE 843225-1A 1/31/08

843225-1A

S4012-I 11/13/07

YOUR ORDER & DATE

HEAT & PIECE 843225 - 1A
WEIGHT 19596
FINISH 1
GRADE 316
DIMENSIONS 3.500 X 96.000 X 200.000 EXACT

ITEM DESCRIPTION

*** MFG IN NEW CASTLE, IN, USA
AMS 5524K EXCEPT LINE MARK
ASTM A480-06B ASME SA480 07E
ASTM A262-02A PRACTICE E
ASTM A312-06 CHEM&MECH ONLY
REFINED A.O.D. PROCESS
NACE MRO175-2003
NO GRIPPER MARKS

SPECIFICATIONS
FROM SLABS IMPORTED FROM BRITAIN
ASTM A240-07 ASME SA240 07ED
ASTM A167-99 (2004)
ASTM A312-06 ANN COND ONLY
MELTED ELECTRIC ARC METHOD
ASTM A262-02 PRACTICE A
NACE MRO103-2005
NO GRIPPER MARKS

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



HARDNESS RB 72
GRAIN SIZE 3
YIELD STRENGTH (PSI) 39653
TENSILE STRENGTH (PSI) 78960
INTERGRANULAR CORROSION OK
ELONGATION % IN 2" 58.5
REDUCTION OF AREA % 71.4

MECHANICAL & OTHER TESTS

ISO 9001-2000
QMI Cert
00385

CARBON (C) .01
MANGANESE (MN) 1.65
PHOSPHORUS (P) .030
SULFUR (S) .001
SILICON (SI) .34
CHROMIUM (CR) 16.28
NICKEL (NI) 10.09
COBALT (CO) .25
COPPER (CU) .44
MOLY (MO) 2.11
NITROGEN (N) .04
COLUMBIUM (CB) .008
TITANIUM (TI) .003
ALUMINUM (AL) .011
TIN (SN) .009
TANTALUM (TA) .004

CHEMICAL COMPOSITION

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 Douman
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P.O. Box 370
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SIAI/F-2881