

Outokumpu Stainless Plate, Inc.



Certificate of Analysis and Tests

OUR ORDER 0267308 - 01

HEAT & PIECE 846852-3A 02/26/09

846852-3A

YOUR ORDER & DATE
S4195-1 1/15/09

ITEM DESCRIPTION
HEAT & PIECE 846852 - 3A
WEIGHT 20192
FINISH 1
GRADE 316L / 316
DIMENSIONS 4.000 X 95.000 X 180.000 EXACT
UNS-S31603 / UNS-S31600

SPECIFICATIONS
*** MFG IN NEW CASTLE, IN, USA
AMS 5507F WITH EXCEPTIONS
ASTMA240-08/ASME SA240 07E08AA
ASTM A167-99(2004)
ASTM A666-03 ANN COND ONLY
MELTED ELECTRIC ARC METHOD
ASTM A262-02A PRACTICE A
NACE MR0103-2005
NO WELD REPAIRS
FROM SLABS IMPORTED FROM BRITAIN
AMS 5524K WITH EXCEPTIONS
ASTMA480-08/ASME SA480 07E08AA
ASTM A262-02A PRACTICE E
ASTM A312-08 CHEM&MECH ONLY
REFINED A.O.D. PROCESS
NACE MR0175-2003/ISO 15156
NO GRIPPER 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 3
YIELD STRENGTH (PSI) 33652
TENSILE STRENGTH (PSI) 75500
INTERGRANULAR CORROSION OR
ELONGATION % IN 2" 51.3
REDUCTION OF AREA % 65.7

CHEMICAL COMPOSITION
CARBON (C) .015
MANGANESE (MN) 1.63
PHOSPHORUS (P) .033
SULFUR (S) .001
SILICON (SI) .31
CHROMIUM (CR) 16.31
NICKEL (NI) 10.03
COBALT (CO) .24
COPPER (CU) .48
MOLY (MO) 2.03
NITROGEN (N) .04
COLUMBIUM (CB) .008
TITANIUM (TI) .008
ALUMINUM (AL) .006
TIN (SN) .012
TANTALUM (TA) .005



ISO 9001:2000

QMI Cert.#

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 DOUBEN, QUALITY ASSURANCE MANAGER

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

Signature of James Douben
Outokumpu Stainless Plate, Inc.
P.O. Box 370
New Castle, Indiana 47382

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