



Certificate of Analysis and Tests

OUR ORDER 0267073 - 01

HEAT & PIECE 846606-1A 01/20/09

846606-1A.

----- ITEM DESCRIPTION -----
 HEAT & PIECE 846606 - 1A
 WEIGHT 16559
 FINISH 1
 GRADE 316L / 316
 DIMENSIONS 5.000 X 72.000 X 158.000 EXACT
 UNS-S31603 / UNS-S31600

----- SPECIFICATIONS -----
 *** MFG IN NEW CASTLE, IN, USA
 AMS 5507F WITH EXCEPTIONS
 ASTMA240-08ASMESA240 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
 ASTMA480-08ASMESA480 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 72
 GRAIN SIZE 3
 YIELD STRENGTH (PSI) 42504
 TENSILE STRENGTH (PSI) 79070
 INTERGRANULAR CORROSION OK
 ELONGATION % IN 2" 50.6
 REDUCTION OF AREA % 66.9

----- CHEMICAL COMPOSITION -----

CARBON	(C)	.016
MANGANESE	(MN)	1.69
PHOSPHORUS	(P)	.035
SULFUR	(S)	.001
SILICON	(SI)	.44
CHROMIUM	(CR)	16.33
NICKEL	(NI)	10.08
COBALT	(CO)	.24
COPPER	(CU)	.33
MOLY	(MO)	2.02
NITROGEN	(N)	.04
COLUMBIUM	(CB)	.009
TITANIUM	(TI)	.003
ALUMINUM	(AL)	.007
TIN	(SN)	.009
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.

M/559

James Douberman

JAMES DOUBMAN, QUALITY ASSURANCE MANAGER

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

Outokumpu Stainless Plate, Inc.
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