



Outokumpu Stainless Plate, Inc.

# Certificate of Analysis and Tests

HEAT & PIECE 839295-1A 02/23/07

----- YOUR ORDER & DATE -----  
 J09735 8/14/06 TAG# 3003-5899-00-1

----- ITEM DESCRIPTION -----  
 HEAT & PIECE 839295 - 1A  
 WEIGHT 6045  
 FINISH 1  
 GRADE 316L / 316  
 DIMENSIONS 5.500 X 60.000 X UNS-S31603 / UNS-S31600  
 63.000 EXACT

----- SPECIFICATIONS -----  
 \*\*\* MFG IN NEW CASTLE, IN, USA  
 AMS 5507F EXCEPT LINE MARK  
 ASTM A240-06 ASMESA240 04E05A  
 ROLLED ALLOYS SPECS 316L/316  
 MEETS EU ELECTRICAL ROHS  
 NO WELD REPAIRS  
 ASTM A262-02A PRACTICE A

FROM SLABS IMPORTED FROM BRITAIN  
 AMS 5524K EXCEPT LINE MARK  
 ASTM A480-05 ASME SA48004E05A  
 NAFTA ORIGIN = SLB CTRY  
 NO CRIPPER MARKS  
 ASTM A262-02A PRACTICE E

PLATES & TEST PCS SOLUTION ANNEALED @ 1950 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 77  
 GRAIN SIZE 4  
 YIELD STRENGTH (PSI) 41509  
 TENSILE STRENGTH (PSI) 78370  
 INTERGRANULAR CORROSION OK  
 ELONGATION % IN 2" 57.6  
 REDUCTION OF AREA % 68.2

ISO 9001:2000  
 QMI Cert.#  
 003861

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

CARBON	(C)	.013
MANGANESE	(MN)	1.72
PHOSPHORUS	(P)	.031
SULFUR	(S)	.001
SILICON	(SI)	.36
CHROMIUM	(CR)	16.35
NICKEL	(NI)	10.10
COBALT	(CO)	.32
COPPER	(CU)	.48
MOLY	(MO)	2.09
NITROGEN	(N)	.04
COLUMBIUM	(CB)	.016
TITANIUM	(TI)	.002
ALUMINUM	(AL)	.006
TIN	(SN)	.009
TANTALUM	(TA)	.005

YS QUALITY ASSURANCE  
 APPROVED *James Douberman*  
 DATE 02/27/07

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*  
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