

Outokumpu Stainless Plate, Inc.

**OUTOKUMPU**

# Certificate of Analysis and Tests

OUR ORDER 0272238 - 01

HEAT & PIECE 849446-3A 07/09/10

SOLD TO:

849446-3A

SHIP TO:

S4495-I	5/21/10	YOUR ORDER & DATE
HEAT & PIECE 849446 - 3A		ITEM DESCRIPTION
WEIGHT	18422	
FINISH	1	
GRADE	304L / 304	UNS-S30403 / UNS-S30400
DIMENSIONS	5.500 X 72.000 X 160.000	EXACT

\*\* MFG IN NEW CASTLE, IN, USA  
 AMS 5511H WITH EXCEPTIONS  
 ASTMA240-09ASMESA240 07E09AD  
 ASTM A167-91  
 ASTM A666-03 ANN COND ONLY  
 MELTED ELECTRIC ARC METHOD  
 ASTM A262-02A PRACTICE A  
 NACE MR0103-2005  
 NO WELD REPAIRS

SPECIFICATIONS  
 FROM SLABS IMPORTED FROM BRITAIN  
 AMS 5513J WITH EXCEPTIONS  
 ASTMA480-09ASMESA480 07E09AD  
 ASTM A262-02A PRACTICE E  
 ASTM A312-09 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)

HARDNESS RB	74	MECHANICAL & OTHER TESTS
GRAIN SIZE	2	
YIELD STRENGTH (PSI)	39220	
TENSILE STRENGTH (PSI)	80100	
INTERGRANULAR CORROSION	OK	
ELONGATION % IN 2"	59.9	
REDUCTION OF AREA %	68.5	

CHEMICAL COMPOSITION		
CARBON (C)		.020
MANGANESE (MN)		1.73
PHOSPHORUS (P)		.035
SULFUR (S)		.001
SILICON (SI)		.30
CHROMIUM (CR)		18.24
NICKEL (NI)		8.56
COBALT (CO)		.14
COPPER (CU)		.45
MOLY (MO)		.40
NITROGEN (N)		.07
COLUMBIUM (CB)		.010
TITANIUM (TI)		.003
ALUMINUM (AL)		.005
TIN (SN)		.015
TANTALUM (TA)		.001



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*

Outokumpu Stainless Plate, Inc.  
 P.O. Box 370  
 New Castle, Indiana 47362

N627  
17E24371