

Outokumpu Stainless Plate, Inc.



Certificate of Analysis and Tests

OUR ORDER 0256464 - 01

HEAT & PIECE 839928-2A 04/25/07

SOLD TO: A. M. CASTLE & COMPANY
3400 NORTH WOLF ROAD
FRANKLIN PARK IL 60131

SHIP TO: A. M. CASTLE METALS
3400 NORTH WOLF ROAD
847-455-7111
FRANKLIN PARK IL 60131

YOUR ORDER & DATE

01-25784

11/16/06

TAG# IAC 18487

ITEM DESCRIPTION

HEAT & PIECE 839928 - 2A
WEIGHT 14807
FINISH 1
GRADE 304L / 304
DIMENSIONS 4.000 X 96.000 X 132.000 EXACT
UNS-S30403 / UNS-S30400

SPECIFICATIONS

*** MFG IN NEW CASTLE, IN, USA
AMS 5511H EXCEPT LINE MARK
ASTM A240-06
ASTM A312-05A CHEMISTRY ONLY
ASTM A480/A480M-05
A M CASTLE S30403-66 REV 1
97/23/EC PED #224/2004/MUC
CASTLE S30403-63 R2 W/EXCEPT
NO GRIPPER MARKS
ASTM A262-02A PRACTICE A
FROM SLABS IMPORTED FROM BRITAIN
AMS 5513H EXCEPT LINE MARK
ASTM A276-05A CON A CHEM ONLY
ASME SA240 04 EDITION 05 ADD
ASTM A479-05A CHEM ONLY
ASTM A249-04A CHEM ONLY
ASTM A262-02A PRACTICE E
GL&V S1243-1 R D W/EXCEPTION
97/23/EC ANNEX 1 PARA 4.3
NO WELD REPAIRS

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 73
GRAIN SIZE 2
YIELD STRENGTH (PSI) 39195
TENSILE STRENGTH (PSI) 81680
INTERGRANULAR CORROSION OK
ELONGATION % IN 2" 57.4
REDUCTION OF AREA % 65.7

CHEMICAL COMPOSITION

CARBON (C) .017
MANGANESE (MN) 1.70
PHOSPHORUS (P) .031
SULFUR (S) .001
SILICON (SI) .32
CHROMIUM (CR) 18.34
NICKEL (NI) 8.64
COBALT (CO) .18
COPPER (CU) .52
MOLY (MO) .37
NITROGEN (N) .07
COLUMBIUM (CB) .019
TITANIUM (TI) .002
ALUMINUM (AL) .004
TIN (SN) .016

CASTLE METALS CORP.
DATE RCVD 4/26/07
IAC 18487
APPROVED BY [Signature]

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.

[Signature of James Douberman]

JAMES DOUBMAN, QUALITY ASSURANCE MANAGER

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

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