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02-15-08 11:51 FROM-

T-778 P025/031 F-235

Outokumpu Stainless Plate, Inc.



Certificate of Analysis and Tests

OUR ORDER 0262528 - 01

HEAT & PIECE 843606-2AA 02/12/08

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

01-43645 1/14/08

TAG# IAC 20581

ITEM DESCRIPTION

HEAT & PIECE 843606 - 2AA
WEIGHT 8549
FINISH 1
GRADE 316L / 316
DIMENSIONS 2.500 X 96.000 X 122.000 EXACT

SPECIFICATIONS

*** MFG IN NEW CASTLE, IN, USA
AMS 5507B EXCEPT LINE MARK
ASTM A240-07
ASTM A479-06A CHEM ONLY
ASTM A480/A480M-06B
ASTM A312-06 CHEMMECH ONLY
ASTM A262-02A PRACTICE E
OLEV S1363-1 R F W/EXCEPTION
97/23/EC ANNEX 1 PARA 4.3
NO WELD REPAIRS
ASTM A262-02A PRACTICE A

FROM SLABS IMPORTED FROM BRITAIN
AMS 5524K EXCEPT LINE MARK
ASTM A240-07 ED CHEM ONLY
ASTM A276-06 ED A CHEM ONLY
A. M. CASTLE 843603-65 REV 1
97/23/EC ANNEX 1 PARA 4.3
CASTLE 843603-65 R2 W/EXCEPT
NO GROUPER MARKS

19.5" (16")

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 74
GRAIN SIZE 5
YIELD STRENGTH (PSI) 80215
TENSILE STRENGTH (PSI) 82930
INTERGRANULAR CORROSION OK
ELONGATION % IN 2" 55.4
REDUCTION OF AREA % 70.3

CHEMICAL COMPOSITION

CARBON (C) .013
MANGANESE (MN) 1.60
PHOSPHORUS (P) .030
SULFUR (S) .001
SILICON (SI) .30
CHROMIUM (CR) 16.31
NICKEL (NI) 10.11
COBALT (CO) .26
COPPER (CU) .72
MOLY (MO) 2.04
NITROGEN (N) .04
COLOMBIUM (CB) .007
TITANIUM (TI) .010
ALUMINUM (AL) .006
TIN (SN) .011
TANTALUM (TA) .004

CASTLE METALS CORP.
DATE RCVD 2/15/08
IAC 20581
APPROVED BY

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 DOULMAN, QUALITY ASSURANCE MANAGER

Outokumpu Stainless Plate, Inc.
PO Box 870
New Castle, Indiana 47362

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