

HT# 839344-4A

Outokumpu Stainless Plate, Inc.



Certificate of Analysis and Tests

OUR ORDER 0255975 - 01

HEAT & PIECE 839344-4A 03/14/07

SOLD TO:

SHIP TO:

YOUR ORDER & DATE

J10035 10/12/06

TAG# 3903-5099-02-1

ITEM DESCRIPTION

HEAT & PIECE 839344 - 4A
WEIGHT 7199
FINISH 1
GRADE 2205+2 / 2205
DIMENSIONS 3.000 X 72.000 X 114.000 EXACT
UNS-S32205 / UNS-S31803

SPECIFICATIONS

\*\*\* MFG IN NEW CASTLE, IN, USA
ASTMA240-06 ASMESA240 04E05A
ASTM A 923-03 METH A, B, & C
MELTED ELECTRIC ARC METHOD
UHA 51 CHARPY @ -40F (-40C)
CONTAINS 40% TO 60% FERRITE
NAFTA CTRY ORIGIN = SLB CTRY
FROM SLABS IMPORTED FROM BRITAIN
ASTMA480-05 ASME SA48004E05A
REFINED A.O.D. PROCESS
NACE MR0175-2003
ROLLED ALLOYS SPEC 2205+2
E562 POINT % FERRITE 40-50%
MEETS ALL ELECTRICAL ROHS

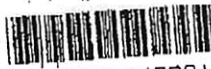
PLATES & TEST PCS SOLUTION ANNEALED @ 1950 DEGREES FAHRENHEIT MINIMUM.
THEN WATER QUENCHED
FREE FROM MERCURY CONTAMINATION AT CURRENT DETECTION LIMITS
HOT ROLLED, ANNEALED & PICKLED (HRAP)

MECHANICAL & OTHER TESTS

HARDNESS RC 18
YIELD STRENGTH (PSI) 71807
TENSILE STRENGTH (PSI) 107070
ASTM A923 METHOD A OK
ELONGATION % IN 2" 33.9
REDUCTION OF AREA % 59.1
A923 METHOD C CORROSION TEST M.D.D. = 0.00 @ 25 DEGREES C 24HRS.
CHARPY TEST AT -40F (TRANS) 83, 90, 91 FT-LBS. FULL SAMPLE SIZE
PERCENT SHEAR = 80%, 80%, 80%
LATERAL EXPANSION = 50, 53, 54 (MILS)
ASTM E-562 POINT COUNT FERRITE = 44.0%
ISO 9001-2000
QAI Cert.#
003851

CHEMICAL COMPOSITION

CARBON (C) .018
MANGANESE (MN) 1.43
PHOSPHORUS (P) .021
SULFUR (S) .001
SILICON (SI) .43
CHROMIUM (CR) 22.35
NICKEL (NI) 5.70
COBALT (CO) .09
COPPER (CU) .12
MOLY (MO) 3.15
NITROGEN (N) .18
COLUMBIUM (CB) .006
TITANIUM (TI) .003
ALUMINUM (AL) .032
TIN (SN) .010
TANTALUM (TA) .004



TRACER# 148931

QUALITY ASSURANCE

APPROVED [Signature]

DATE 03/12/07

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.

[Signature]

JAMES DOUBMAN, QUALITY ASSURANCE MANAGER

Outokumpu Stainless Plate, Inc. CERTIFICATE IN CONFORMANCE WITH EN10204-95 3.1.B/EN10204-2004 3.1
P.O. Box 370
New Castle, Indiana 47362

Mater. UNS-S31803
Gr 2205
E16084