

OUTOKUMPU

Certificate of Analysis and Tests

OUR ORDER 0276973 - 01

HEAT & PIECE 852271-2A 08/23/11

SOLD TO:

SHIP TO:

UC 11202 11193
Derek Shuman

----- YOUR ORDER & DATE -----
795 7/22/11
----- ITEM DESCRIPTION -----
HEAT & PIECE 852271 - 2A
WEIGHT 7272
FINISH 1
GRADE 304LP / 304P
DIMENSIONS 1.000 X 101.000 X 243.000 EXACT
UNS-S30403 / UNS-S30400

*** MFG IN NEW CASTLE, IN, USA
AMS 5511H WITH EXCEPTIONS
PLUS TEN T304L PRODEC
ASTM A240-11A ASME SA240-10E
ASTM A167-91
MIL-S-5059D WITH EXCEPTIONS
ASTM E112-96E2
ASTM A312-11 CHEM&MECH ONLY
NO SPECS REQUIRED ON INVOICE
QQ-S-763F COND A CHEM ONLY
NACE MRO175-2003/ISO 15156
NO WEEE RELEVANT SUBSTANCES
ASTM A262-02A PRACTICE A
PRODEC QUALITY

SPECIFICATIONS
FROM SLABS IMPORTED FROM BRITAIN
AMS 5513J WITH EXCEPTIONS
ASTM A276-10 CHM&MECH CON-A
ASTM A480-11A ASMESA480 10ED
ASTM A479-10A CHEM&MECH ONLY
OUTOKUMPU MACH TEST LP020
MEETS RQMTS UNS S30302 T302
QQ-S-766D AMENDIII EX.P4.5.2
LIST HEAT/PIECES ON INVOICE
ASTM A666-03 ANN COND ONLY
MEETS EU ELECTRICAL ROHS
DFAR 252.225-7014 & ALT 1
ASTM A262-02A PRACTICE E

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)

----- MECHANICAL & OTHER TESTS -----
HARDNESS HRBW 79
GRAIN SIZE 6
YIELD STRENGTH (PSI) 43013
TENSILE STRENGTH (PSI) 91950
BEND OK
INTERGRANULAR CORROSION OK
ELONGATION % IN 2" 54.7
REDUCTION OF AREA % 53.5

CMTR'S FURNISHED BY
CUSTOMER *TCI ALUMINUM/NORTH*
P.O.# *32991* S.O.# *6777*
DESC. *24 x 24*
QTY. *1pc*

----- CHEMICAL COMPOSITION -----
CARBON (C) .016
MANGANESE (MN) 1.38
PHOSPHORUS (P) .030
SULFUR (S) .021
SILICON (SI) .41
CHROMIUM (CR) 18.36
NICKEL (NI) 8.12
COBALT (CO) .15
COPPER (CU) .46
MOLY (MO) .38
NITROGEN (N) .07
COLUMBIUM (CB) .010
TITANIUM (TI) .009
ALUMINUM (AL) .005
TIN (SN) .016
TANTALUM (TA) .001

ISO 9001-2008
SAI Cert#CERT-0033834

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.