



Certificate of Analysis and Tests

 * RE-CERTIFICATION *

OUR ORDER 0274081 - 03

849644-1A

HEAT & PIECE 849644-1A 04/08/11

SOLD TO: C.F.F. SPECIALTY STEELS INC.
 1840 BURLINGTON ST. E.

SHIP TO: CUSTOMER PICK UP
 CONTACT NATALIE FAX 905-549-29
 OR NHILDEBRANDT@CFFSTAINLESS.C
 ONTARIO CN 00000

ONTARIO L8H 3L4 00000

----- YOUR ORDER & DATE -----
 C76236 11/03/10

----- ITEM DESCRIPTION -----
 HEAT & PIECE 849644 - 1A
 WEIGHT 15914
 FINISH 1
 GRADE 316L / 316 UNS-S31603 / UNS-S31600
 DIMENSIONS 3.000 X 96.000 X 189.000 EXACT

----- SPECIFICATIONS -----
 *** MFG IN NEW CASTLE, IN, USA FROM SLABS IMPORTED FROM BRITAIN
 ASTM A240-11 ASME SA240 10E ASTM A480-11 ASME SA480 10ED
 NACE MRO175-2003/ISO 15156 NO GRIPPER MARKS
 NO WELD REPAIRS
 ASTM A262-02A PRACTICE A 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 RB 71
 GRAIN SIZE 4
 YIELD STRENGTH (PSI) 33820
 TENSILE STRENGTH (PSI) 76700
 INTERGRANULAR CORROSION OK
 ELONGATION % IN 2" 59.3
 REDUCTION OF AREA % 61.7

----- CHEMICAL COMPOSITION -----
 CARBON (C) .016
 MANGANESE (MN) 1.63
 PHOSPHORUS (P) .035
 SULFUR (S) .001
 SILICON (SI) .43
 CHROMIUM (CR) 16.15
 NICKEL (NI) 10.10
 COBALT (CO) .29
 COPPER (CU) .47
 MOLY (MO) 2.06
 NITROGEN (N) .03
 COLUMBIUM (CB) .022
 TITANIUM (TI) .003
 ALUMINUM (AL) .007
 TIN (SN) .010
 TANTALUM (TA) .004



FIG 0001-2007
 04/08/11

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