



Certificate of Test

 * CERTIFICATION *

HEAT E71579

ORDER 0493056/001 SON D65247 BOL 0146280 TAG 1888311 11/13/07

SHIP TO:
 A. M. CASTLE METALS
 3400 NORTH WOLF ROAD

FRANKLIN PARK IL 60131

----- YOUR ORDER & DATE -----
 01-35310 11/13/07 CUST# CASTLE01 CUST TAG#IAC 23350

----- ITEM DESCRIPTION -----
 GRADE 316L/316
 Size 316L HRART RND BAR **6-1/4** TD Country of Melt: BRI
 Ship Condition A Country of Mfg.: SWE
 NAFTA Country of Origin is Country of Melt

Total Bundles 1 SON Weight 3740

----- SPECIFICATIONS -----
 AMS 5648K, 5653F SAE-AMS QQ-S-763B
 AMS-S-7720 ASME SA182 E04 A06 CHEM. ONLY
 ASME SA193 E04 A06 ASME SA479 E04 A06
 ASTM A182-06 CHEMISTRY ASTM A262 02A PRACTICE A/E
 ASTM A276 06 ASTM A479 06
 ASTM E112 96 ASTM A193 06A B8M
 DIN 50049/EN 10204 3.1B UNS S31600, AISI 316
 UNS S31603, AISI 316L AM CASTLE 3316-98 REV 28
 SOLUTION ANNEALED CONDITION FREE OF CONT. CARBIDE NETWORK
 NO WELD REPAIR FREE OF MERCURY CONTAMINATION

----- MECHANICAL & OTHER TESTS -----
 Test Condition A
 Hardness as shipped (141 HBW)
 Hardness as shipped 76 HRBS
 Grain size 5.5 Tensile strength, KSI (MPa) 80.5 (555)
 Micro OK 0.2% Yield Strength, KSI (MPa) 34.1 (235)
 Intergranular corrosion OK
 Macro OK Elongation % in 4D 63.0
 Reduction of area % 76.0

----- CHEMICAL COMPOSITION -----
 Carbon (C) .024 Manganese (Mn) 1.670
 Phosphorus (P) .027 Sulphur (S) .025
 Silicon (Si) .449 Chromium (Cr) 16.660
 Nickel (Ni) 10.000 Cobalt (Co) .243
 Copper (Cu) .458 Moly (Mo) 2.000
 Nitrogen (N) .067 Columbium (Cb) .027
 Titanium (Ti) .003 Aluminum (Al) .004
 Tin (Sn) .011 Boron (B) .001
 Tantalum (Ta) .004 Vanadium (V) .070
 Columbium/
 Tantalum (Cb+Ta) .031
 Iron (Fe) Balance
 Melt Practice EAF
 Refining Practice AOD
 De-long Ferrite

CASTLE METALS CORP
 DATE RCVD 11-16-07
 IAC 23350
 APPROVED BY *[Signature]*

Knowingly & willfully falsifying or concealing a material act on this form, or making false, fictitious or fraudulent statements or representations herein could constitute a felony punishable under federal statutes.

We hereby certify that the test results shown in this report are correct and accurate as contained in the records of the company and are in compliance with the specifications, codes, and standards listed above.

M.F. Marcanio, Quality Manager

M.F. Marcanio