



Certificate of Test



* CERTIFICATION *

HEAT E70865

ORDER 0491983/001 SON D64268 BOL 0144917 TAG 1873956 08/22/07

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

E70865

FRANKLIN PARK IL 60131

----- YOUR ORDER & DATE -----
01-33824 8/22/07 CUST# CASTLE01 CUST TAG#IAC 6805

----- ITEM DESCRIPTION -----
GRADE 316L/316
Size 316L HRART RND BAR 5-1/4 STD Country of Melt: BRI
Ship Condition A Country of Mfg.: SWE
NAFTA Country of Origin is Country of Melt

Total Bundles 1 SON Weight 3644

----- SPECIFICATIONS -----
AMS 5648K, 5653F SAE-AMS QQ-S-763
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

----- MECHANICAL & OTHER TESTS -----
Test Condition A
Hardness as shipped (143 HBW)
Hardness as shipped 76 HRBS
Grain size 5.5 Tensile strength,KSI (MPa) 84.3 (581)
Micro OK 0.2% Yield Strngth,KSI(MPa) 36.4 (251)
Intergranular corrosion OK
Macro OK Elongation % in 4D 59.0
Reduction of area % 74.0

----- CHEMICAL COMPOSITION -----
Carbon (C) .019 Manganese (Mn) 1.710
Phosphorus (P) .024 Sulphur (S) .028
Silicon (Si) .539 Chromium (Cr) 16.440
Nickel (Ni) 10.140 Cobalt (Co) .267
Copper (Cu) .343 Moly (Mo) 2.050
Nitrogen (N) .067 Columbium (Cb) .012
Titanium (Ti) .002 Aluminum (Al) .004
Tin (Sn) .007 Tantalum (Ta) .004
Vanadium (V) .050 .000
Columbium/
Tantalum (Cb+Ta) .016
Iron (Fe) Balance
Melt Practice EAF
Refining Practice AOD
De-long Ferrite

CASTLE METALS FP
DATE REC'D 8/20/07 IAC 6805
APPROVED BY: REC

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