

HEAT E150636 ORDER 658727/ 08 BOL 0233072 * CERTIFICATION * 08/13/15

SHIP TO:
ROLLED ALLOYS BAR CENTER
711 PHOENIX LAKE AVENUE

STREAMWOOD 601070000

----- YOUR ORDER & DATE -----
0123530-STR 3/19/15 CUST# 0773001 CUST TAG#0009414

----- ITEM DESCRIPTION -----
GRADE 316L/316 Ship Condition CONDA
Size 316L RND HRART CONDA 9.0000 x 144.000 RL
Country of Melt: UNITED KINGDOM Country of Mfg.: UNITED KINGDOM
NAFTA Country of Origin is Country of Melt

No weld repair
Free of mercury contamination, Free of radiation contamination
No WEEE relevant substances; Meets EU electrical ROHS

Total Bundles 1 Total Weight 5390 Approx. Hot Red. Ratio 8:1

WO 2062036 Bundles: 1C

----- SPECIFICATIONS -----

AMS 5648L, 5653H
ASME SA182 2007-2013 Ed
ASME SA479 2007-2013 Ed.
ASTM A182 15
ASTM A276-15
ASTM A479/A479M 14
ASTM A320 11 B8M Class 1
NACE MR0175-09, ISO 15156:09
Federal Spec QQ-S-763F
UNS S31603, AISI 316L
EN 10204 Type 3.1 Document
EN 10272 GR 1.4404 chemistry
DFARS 225.7002-3(B)(1)
Sol Ann 1850F min/Rapid Cool

SAE AMS-00-S-763D
ASME SA193 2013 Edition
ASME SA320 B8M CL1, 2013 Ed.
ASTM A262 14 Practice A/E
ASTM A314 13a
ASTM A484 15
ASTM A193 14 B8M
DFARS 252.225.7009 10/4/11
UNS S31600, AISI 316
Prodec Quality
RA-53 RAM 316L
Butech BU-36 Rev 2
NACE MR0103-10

ROLLED ALLOYS

----- MECHANICAL & OTHER TESTS -----

Hardness as shipped (149 HB)			
Hardness as shipped (79 HRB)			
Grain size	6.0	Tensile strength, KSI (MPa)	84.5 (583)
Micro	OK	0.2% Yield Strngth, KSI (MPa)	35.3 (243)
Intergranular corrosion	OK	Elongation % in 4D	59.6
		Reduction of area %	75.0

----- CHEMICAL COMPOSITION -----

Carbon (C)	.017	Manganese (Mn)	1.600
Phosphorus (P)	.036	Sulphur (S)	.025
Silicon (Si)	.350	Chromium (Cr)	16.810
Nickel (Ni)	10.080	Cobalt (Co)	.287
Copper (Cu)	.450	Moly (Mo)	2.090
Nitrogen (N)	.075	Columbium (Cb)	.037
Titanium (Ti)	.003	Aluminum (Al)	.005
Tin (Sn)	.010	Boron (B)	.001
Tantalum (Ta)	.003	Vanadium (V)	.060
Tungsten (W)	.093		.000

RECEIVING INSPECTION

By: JUAN
Date: 09/26/16

HEAT * E150636
TRPCR * 0002391ED

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.

Outokumpu
3043 Crenshaw Blvd
Richburg, SC 29729

M.F. Marcario, Quality Manager

M.F. Marcario

with GAF Patch to 60640
 (GAF) G F O E 40