

27BR40

HT#E171767

MILL TEST REPORT

TA CHEN INTERNATIONAL, INC.

This MTR contains 1 page (Page# 1)

Customer: EMJSCH PO#:P879901-423 SO#:LYQC01

MTR#:OURB1772.GIF

Item:RB6L0216 Bundle:OUK5028002 Heat#:E171767

5 25+25

R + 93291



Certificate of Test

VALUE PRODUCT Page: 1

HEAT E171767 ORDER 675691/ 24 BOL U241631 * CERTIFICATION * 12/14/17

SHIP TO: TA CHEN INTERNATIONAL (SP), 8500 109TH STREET

PLEASANT PRAIRIE 531580000

----- YOUR ORDER & DATE ----- L67446 7/20/17 CUST# 1915000 CUST TAG#RB6L0216/OU

----- ITEM DESCRIPTION ----- GRADE 316L/316 VALUE PRODUCT Ship Condition CONDA Size 316L RND CFA CONDA 2.2500 x 144.000 RL Country of Melt: UNITED KINGDOM Country of Mfg.: UNITED STATES NAFTA Country of Origin is Country of Melt

VALUE PRODUCT, NOT PRODEC TREATED No weld repair Free of mercury contamination, Free of radiation contamination No WEEE relevant substances; Meets EU electrical ROHS

Total Bundles 2 Total Weight 1696 Approx. Hot Red. Ratio 8:1

WO 2081751 Bundles: 1B, 1G

----- SPECIFICATIONS ----- MFG TO FINISHED BAR IN THE USA FROM BILLETS IMPORTED UNITED KINGDOM AMS 5648M, 5653H SAE AMS-QQ-S-763D ASME SA182 2007-2015 Ed ASME SA193 2015 Edition ASME SA479 2007-2015 Ed. ASME SA320 BSM CL1, 2015 Ed. ASTM A182/A182M 17 ASTM A262 15 Practice A/E ASTM A276-17 ASTM A314 15 ASTM A370 14 ASTM A479/A479M 17 ASTM A484/A484M 16 ASTM E112-13 ASTM A320 17a BSM Class 1 ASTM A193 16 BSM DIN 50049/EN 10204 Type 3.1 DFARS 252.225-7009 10/4/11 Federal Spec QQ-S-763F UNS S31600, AISI 316 UNS S31603, AISI 316 NACE MR0175-09, ISO 15156:09 NACE MR0103-10 Sol Anneal at 1900F min/ Water Quench

----- MECHANICAL & OTHER TESTS ----- Hardness as shipped 163 HB Hardness as shipped (83 HRB) Grain size 8.5 Tensile strength, KSI (MPa) 84.9 (585) Micro OK 0.2% Yield Strength, KSI (MPa) 36.7 (253) Intergranular corrosion OK Elongation % in 4D 51.9 Reduction of area % 74.7

-- Continued --

M.E. Marconis

Customer: EMJSCH PO#:P879901-423 SO#:LYQC01
 Item:RB6L0216 Bundle:OUK5028002 Heat#:E171767
 Item:RB6L0216 Bundle:OUK5028003 Heat#:E171767



Certificate of Test

HEAT E171767
 ORDER 675691/ 24 BOP 0241631 * CERTIFICATION * 12/14/17
 SHIP TO:
 TA CHEN INTERNATIONAL (SP)
 8500 109TH STREET
 PLEASANT PRAIRIE 531580000

 CHEMICAL COMPOSITION

Carbon	(C)	0.019
Phosphorus	(P)	0.032
Silicon	(Si)	0.390
Nickel	(Ni)	10.070
Copper	(Cu)	0.490
Nitrogen	(N)	0.067
Iron	(Fe)	Balance
Melt practice		
Refining practice		
De-long ferrite		

 Manganese (Mn) 1.720
 Sulfur (S) 0.025
 Chromium (Cr) 16.630
 Cobalt (Co) 0.197
 Moly (Mo) 2.030

Knowingly & willfully falsifying or concealing a material act on this form, or making false, fictitious or fraudulent statements or representations, or 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. P. Marcanto, Quality Manager

M.P. Marcanto

Outokumpu Stainless Bar, LLC
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 Richmond, SC 29129