



PO 75844
CPA PD 1498
WD 5421

Product Certification Report

Report Number: 4644501

Certified on Mar 28, 2011 Page 1 of 2

Order I.D. 1100380 003	Order Date 2/04/11	Commodity Code			
Dim 1 3.7500	Dim 2 .0000	Dim 3 .0000	Heat I.D. 252353	Customer I.D. 002558	Customer Purchase Order 5400092999-R05
Product Shape Rounds		Product Surface HR & Rough Turned		Customer Grade 316/316L	
Length (Inches) 132.000 Min. 156.000 Max.		Bill of Lading # 414199	Weight		

Ship To
COPPER AND BRASS SALES
10648 WEST LITTLE YORK
SUTIE 400
HOUSTON, TX 77041

Sold To
VALBRUNA STAINLESS, INC.
2400 TAYLOR STREET WEST
FORT WAYNE, IN 46802

Lifts: 0043
CONDITION A
ASTMA 276-10
AMS 5648K
*NACE MR0175-03
ASTMA 479-10a
AMS 5653F
QQ-S-763F
ASMESA 479-07
SAE-AMS QQ-S-763B

CHEMICAL ANALYSIS

C	Mn	P	S	Si	Cr	Ni	Mo	Cu	Co	N
.013	1.53	.028	.030	.54	16.76	10.00	2.09	.48	.10	.06

BRINELL HARDNESS ASTM E10-08
HBW
174

TENSILE PROPERTIES ASTM E8-08
TS (PSI) .2%YS (PSI) %EL(2") %RA
85100 43400 63.4 79.1

MACRO ASTM E340-00/E381-01
MACRO
OK
OK

GRAIN SIZE ASTM E112-96
GRAIN SIZE Etchant Magnification X
7 Oxalic 100

ASTMA 262-10 PR E(A Utilized)
OXALIC Etchant Magnification X
OK Oxalic 500

No mercury or low melting alloy contamination. Continuous carbide and intergranular corrosion test OK.
No welding or weld repair done.
Heated to 1900F min. and water quenched (heating time & temp appropriate for optimum quality).
Material meets the ordered requirements of 316 and 316L.
*Certification revised at Valbruna by D. Hackett (6/30/11).
Chemical testing performed to one or more of the following ASTM methods: E415-08, E572-02a, E1019-08, E1085-9
Location of tensile fracture: inside middle of gage length.
Chemical Analysis performed at Acciaierie Valbruna, Italy.
No mercury or low melting alloy contamination. No weld repair.
Material melted in Italy, manufactured in the United States.
Material conforms to listed specifications and is DFARS compliant.

Results relate only to the items tested. Certification shall not be reproduced except in full, without written approval of Valbruna Stainless Inc. The recording of false, fictitious, or fraudulent statements on this document may be punished as a felony under federal statutes, including Federal law, Title 18, Chapter 47. Consult material safety data sheet (MSDS) for hazard info. I hereby certify that the reported figures are correct as contained in the records of the corporation.

Manager Laboratory Services
Dennis Hackett
Dennis Hackett



VALBRUNA

SLATER STAINLESS, INC.
2400 Taylor Street West, P.O. Box 630
Fort Wayne, Indiana USA 46801
Phone: 260-434-2892 Fax: 260-434-2905

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Quality system is compliant with ISO 9001:2008. Produced in accordance with EN 10204 3.1.

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Manager Laboratory Services *Dennis Hackett*
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