

C+B P076481 W05539 CPA3-80

252499.



VALBRUNA

SLATER STAINLESS, INC.
 2400 Taylor Street West, P.O. Box 630
 Fort Wayne, Indiana USA 46801
 Phone: 260-434-2882 Fax: 260-434-2808

Product Certification Report

Report Number: **4646731**

Certified on Apr 01, 2011 Page 1 of 2

14"

Order ID 1100380 007	Order Date 2/04/11	Commodity Code
Price 5.2500	Dia 2 .0000	Dia 3 .0000
Weight L.D. 252499	Customer L.D. 002558	Customer Purchase Order 5400092999-R05
Product Shape Rounds	Product Finish HR & Rough Turned	Customer Grade 316/316L
Length (Inches) 132.000 Min. 156.000 Max.	Rt of Ledger # 414269	Weight

Ship To
 COPPER AND BRASS SALES
 10548 WEST LITTLE YORK
 SUITE 400
 HOUSTON, TX 77041

Handwritten:
 10/24/11

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

Lifts: 0022
 CONDITION A
 ASTM 276-10
 AMS 5648K
 CHEMICAL ANALYSIS

*NACE MRO 175-05 ISO 15156
 ASTM 479-10a
 AMS 5653F
 QQ-S-763F
 ASMESA 479-07
 SAE-AMS QQ-S-763B

C	Mn	P	S	Si	Cr	Ni	Mo	Cu	Co	N
016	1.69	0.029	0.027	.50	16.72	10.11	2.03	.46	.12	.07

BRINELL HARDNESS ASTM E10-08
 HBW
 158

TENSILE PROPERTIES ASTM E8-08
 TS (PSI) .2%YS (PSI) %EL(2") %RA
 81100 34500 59.0 79.8

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

GRAIN SIZE ASTM E112-96
 GRAIN SIZE Etchant Magnification X
 8 Oxalic 100
 ASTM 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 (7/20/11).
 Chemical testing performed to one or more of the following ASTM methods: E415-08, E572-02a, E1019-08, E1085-95.
 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

Handwritten Signature: Dennis Hackett

Dennis Hackett



VALBRUNA

SLATER STAINLESS, INC.
2408 Taylor Street West, P.O. Box 680
Fort Wayne, Indiana USA 46801
Phone: 260-434-2882 Fax: 260-434-2906

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Report Number: **4646731**

Certified on Apr 01, 2011 Page 2 of 2

Order I.D. 1100380 007		Order Date 2/04/11		Contract Code	
Dim 1 5.2500	Dim 2 .0000	Dim 3 .0000	Heat I.D. 252499	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 # 414269	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

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

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Manager Laboratory Services

Dennis Huckert