

263635-15.0
9302590814

Date: 6/13/2014 To: THYSSENKRUPP MATERIALS NA INC SO#: A824925 Ln#: 4 PO#: 5400226883-R05 Part: 399463 Heat#: 263635 Tag: V3765403B

Acciaierie Valbruna S.p.A.



**CERTIFICATO DI COLLAUDO
ABNAHMEPRUEFZEUGNIS
INSPECTION CERTIFICATE
CERTIFICAT DE RECEPTION
EN 10204 (2004) , 3.1**

36100 VICENZA (Italia) - Viale della scienza, 25 z.l.
Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4

Clients / Besteller/Purchaser/Clients
VALBRUNA STAINLESS INC.
2400 TAYLOR STREET WEST
48801-FORT WAYNE, IN 48801-US

Produttore: **ACCIAIERIE VALBRUNA S.P.A.**
Hersteller/Usine producer

Stato di finitura: Forged - Annealed FORGED
Ueberzustand/Obervorgabe state/Etat de finition

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER

Avviso di Spedizione: D-V114011492
Lieferungs-/Packung St.Nr.L

Certificato nr: MEST495870/2014/
Prüfung/Teil/Essai

Ordine nr: 37854 STOCK CHINO
Bestell-/your order/Commande

Confirma ordine nr: E114000647
Werkz./our Order/nr.

Tipo di Elaborazione: E+AOD
Erweich-/ungearbeitet/Meining process/Mode d'elaboration

Marchio di Fabbrica:
Zeichen des Ueberwerkes
Trade mark
Bleig der Usine producer



Funzione del Collaudatore:
Stempel des Werkstoffversuchsingenieur
Inspector's stamp/Postage de l'essayeur

Specifiche:
Anforderungen / Requirements / Esigences

- VSI 0 316/316L A
- AMS 5653 H S31603 A
- ASME SA193 2010 B8M CLASS1 (1)
- ASME SA479 2010 S31600/03 A (4)
- ASTM A262 2010. PRACTICE E
- ASTM A320 2011A B8M CLASS1
- ASTM A479 2013A S31600/03 A
- NACE MR0175 2009 S31600/03 A (7)

- AISI 316/316L
- AMS-QQ-S-763 B 316/316L A
- ASME SA278 2010 S31600/03 A (2)
- ASTM A182 2012B S31600/03 A (5)
- ASTM A278 2013 S31600/03 A
- ASTM A370 2012A
- MIL-S-862 B/1 316/316L
- QQ-S-763 F 316/316L A

- AMS 5648 L S31600 A
- ASME SA182 2010 S31600/03 A (0)
- ASME SA320 2010 B8M CLASS1 (3)
- ASTM A193 2011A B8M CLASS1
- ASTM A314 2008 S31600/03
- ASTM A479 2001 S31600/03 (8)
- NACE MR0103 2010 S31600/03 A

- (0) SEC.II PT.A 2010 EDITION ADD. 2011a
- (1) SEC.II PT.A 2010 EDITION ADD. 2011a
- (2) SEC.II PT.A 2010 EDITION ADD. 2011a
- (3) SEC.II PT.A 2010 EDITION ADD. 2011a
- (4) SEC.II PT.A 2010 EDITION ADD. 2011a
- (5) For products machined directly from bar refer also
- (6) Chemical analysis only.
- (7) Technical circular I:2011 Published 2011-08-14

- (0) For products machined directly from bar refer to ASME SA479.
- (2) SEC.II PT.A 2010 EDITION ADD. 2011a
- (4) SEC.II PT.A 2010 EDITION ADD. 2011a
- (5) to ASTM A479.
- (7) ANSI/NACE MR0175/ISO 15156-3, second edition 2009-10-15

Qualità: 316/316L
Werkstoff/Grade/Qualite

Marca: APML

Tolleranza: ASTM A484-11 TABLE 3
Toleranz/Allowance/Tolerance

Funzionatura: 316/316L
Kennzeichnung/Marking/Markings

Pos. nr. Post. nr. Item nr. Nr. de postii	Oggetto Object Product description Description du produit	Dimensioni - in Abmessungen Dimension Dimension	Lunghezza - in Länge Length Longueur	Colata Schmelze Heat Coulée	Pezzi Stücke Pieces	Peso - LB Gewicht Weight Poids	Lotto nr. Loseil. Lot nr. Lot nr.
0030	Round	15,0000	151 / 157	263635		15,900	403106250

TEST ALLO STATO DI FORNITURA

TEST	Provetta/ Speichprobe Lap size / Spec. Diam. Diam. Diam. Wickl. Wickl. Wickl. Lap. diam. Lap. mm	°F	Posiz. SAP/10 Position Position	Snervamento Stressing Yield Stress Yield strength Rp 0,2% k.s.l.	Snervamento Stressing Yield Stress Yield strength Rp 0,2% k.s.l.	Resistenza Zugfestigkeit Tensile strength Tensile strength Rm k.s.l.	Allungamento Zugverlängerung Elongation Elongation E 4d %	Strizione Einschnürung Neckdown of tens. Neckdown		Resilienza Kerbschlagenergie Impact Value Resilience	Durezza Kern Hardness Dureza HB
								RA %	RA %		
Valori richiesti / Anforderung/Required value Valeur demandée		min max		30		75 115	40		50		140 223
A	12,5	68	L	37		81	61		74		168

TEST	min	max
A Grain size for ASTM E112		3

Mechanical properties according to ASTM A370.

Analisi chimica

Chemische Zusammensetzung/Chemical Analysis/Analyse chimique

Colata Heat Schmelze/Heat	min - max 0,030	1,00	1,25 2,00	16,50 18,00	2,00 3,00	1,00	10,00 14,00	0,040	0,020 0,030	0,100	-	-	-	-
263635	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %			
	0,017	0,30	1,70	16,67	2,02	0,60	10,08	0,122	0,031	0,029	0,078			

Produced without class I-II Ozone depleting substances.
Solution heat treated free from continuous carbide network.
Annealing temperature: 1940°F for 9 h/water.
Micro and macro etch test: OK
Reduction ratio > 4 : 1
Intergranular corrosion test per ASTM A262 pract. E: ok.

Vicenza, 01/04/14 VCC/CS (Mod. MCE2)	Il collaudatore di stabilimento / der Werksachverständiger / Works inspector / L'agent d'usine <i>M. Rizzotto</i>	Pagina - 1 di 2
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From: Copper and Brass Sales CA

Cust. TECHNOWORX INC

CstAr

Wgt.: 1,151.709 LB

Del.: 2403415606

CstOr 379

Date 10/04/2014

John L. Zambetti

**CERTIFICATO DI COLLAUDO
ABNÄHMENPRÜFZEUGNIS
INSPECTION CERTIFICATE
CERTIFICAT DE RECEPTION
EN 10204 (2004) , 3.1**



**Acciaierie
Valbruna s.p.a.**

36100 VICENZA (Italia) - Viale della scienza, 25 ZL.
Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4

Clienti / Kunden / Customers:
VALBRUNA STAINLESS INC,
2400 TAYLOR STREET WEST,
46801-FORT WAYNE, IN 46801-US

Produktion: **ACCIAIERIE VALBRUNA S.P.A.**
Herstellung/Virtus production

State of delivery: Forged - Annealed FORGED
Umschreibung: gewalzte oder Fraktion

Absence of cracks at 20 x magnification after bend test.
Material is DFARS Compliant

Sono stati soddisfatti tutti i condizionali richiesti
Controllo antimicrobiano: OK
Verwerkingswijze: gewalst/geschmiedet
Ausschlag in die Form: OK
Die gewalzte Ausführung erfüllt die Anforderungen
The material has been finished in accordance with the requirements
The material is safe for use in food and medical applications

Controllo antimicrobiano: OK
Verwerkingswijze: gewalst/geschmiedet
Ausschlag in die Form: OK
Die gewalzte Ausführung erfüllt die Anforderungen
The material is safe for use in food and medical applications

Metal free from mercury contamination
No welding or weld repair
We declare that the finished product is checked for radioactive contamination through Portal System when it leaves the production plant.

The Quality Management System is Certified acc. Pressure Equipment Directive (97/23/EC) Annex 1, 4.2 by TÜEV and LLOYD'S
Any act of tampering, modification, alteration, counterfeiting and/or falsification and/or any other action which modifies the content of this test certificate shall constitute a violation of applicable civil and criminal laws. Acciaierie Valbruna shall protect its rights and interests before any competent court, authority and jurisdiction.
The supplied product conforms to requirements requested by the purchaser and conforms to requirements specified by certified norms and standards. Should the product be used for more severe, critical and/or in any case different applications than those the material is generally intended for, any different and/or supplementary requirements shall be specifically demanded, at least, upon order of the Product by the Purchaser. Acciaierie Valbruna S.p.A shall not be responsible for any improper use of the Product.

Controllo Valbruna e dimensionale: soddisfa le esigenze
Fattoring and dimensioning: this is according
(Year) inspection and dimensioning: satisfactory

Puntatore dei Collaudatori:
Specialized Werkstoffprüfer
Inspector's stamp



Certificato nr: MEST496870/2014/
Produktionsnummer
Certification order nr: E14000847
Werkstoff-Charakteristik
Material designation

Avviso di Spedizione: D-V114011492
Lieferung auftrag: siehe L.
Ordine nr: 37654 STOCK CHINO
Bestell-/Vertragsnummer

Tipo di Elaborazione: E+AOD
Erzeugnisbezeichnung: E+ADOX

Vicenza, 01/04/14 (Mod. 1003)	Il collaudatore di abilitamento / der Werkstoffprüfer / der Material Inspector / L. agent d' ushno <i>M. Rizzotto</i>	Pagina - 2 di 2
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From: Copper and Brass Sales CA
Cust. TECHNOWORX INC
CSTAR
Mgt.: 1,151.709 LB
Date 10/04/2014
CStar 379
Del.: 2403415606

John J. Smith