



Acciaierie Valbruna S.p.A.

36100 VICENZA (Italia) - Viale della scienza, 25 z.l.
 Telefono 0444.968211 - Fax 0444.963836
 Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4/37
 Telefono 0471.924111 - Fax 0471.924497

CERTIFICATO DI COLLAUDO - ABNAHMEPRUEFZEUGNIS - INSPECTION CERTIFICATE - CERTIFICAT DE RECEPTION

In conformità a: **EN 10204 (2004), 3.1**
Nach/According to/Selon

Certificato nr. **MEST959057 / 2016 /**
Prüfung/Test/Essai

Cliente / Besteller/Purchaser/Clien
VALBRUNA STAINLESS INC.
 2400 TAYLOR STREET WEST
 46801 - FORT WAYNE, IN 46801 - US

Stato di fornitura: **Forged - Annealed FORGED**
Lieferzustand
 Delivery state
 Etat de livraison

Produttore:
Hersteller/fabrik/Usine producteur
ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: **51853 STOCK HOUSTON**
Bestell
 Your order
 Commande

Tipo di Elaborazione: **E+AOD**
Fischmelzungsart
 Melting process
 Modele d'elaboration

Marchi di Fabbrica:
Zeichen des Lieferanten
 Trade mark
 Signes de l'usine productrice



Conferma ordine nr: **EI16011424**
Werk/Our Order/Ref. nr.

Qualità: **316/316L**
Werkstoff/Grade/Numéro

Punzione del Collaudatore:
Stempel des Werkstoffverständigen
 Inspector's stamp/Pointage de l'essayeur

MR

Avviso di Spedizione: **D-VI16029101**
Lieferungsg/Packing list/S.L.

Marca: **APML**
Markenbezeichnung
 Brand / Nuance

Punzonatura: **316/316L**
Kennzeichnung
 Marking
 Marquage

SPECIFICHE :

Note:

Anforderungen / Requirements / Exigences

Aufzeichnungen / Notes / Notes

- VS1 0 316/316L A
- AISI 316/316L
- AMS 5648 M S31600 A
- AMS 5653 H S31603 A
- AMS-QQ-S-763 D 316/316L A
- ASME SA182 2015 S31600/03 A (0)
- ASME SA193 2015 B8M CLASS1 (1)
- ASME SA276 2015 S31600/03 A (2)
- ASME SA320 2015 B8M CLASS1 (3)
- ASME SA479 2015 S31600/03 A (4)
- ASTM A182 2016 S31600/03 A (5)
- ASTM A193 2016 B8M CLASS1
- ASTM A262 2015 PRACTICE E
- ASTM A276 2016 S31600/03 A
- ASTM A314 2015 S31600/03
- ASTM A320 2015A B8M CLASS1
- ASTM A370 2015 .
- ASTM A473 2001 S31600/03 (6)
- ASTM A479 2016 S31600/03 A
- MIL-S-862 B/1 316/316L
- NACE MR0103 2010 S31600/03 A
- NACE MR0175 2009 S31600/03 A (7)
- QQ-S-763 F 316/316L A

- (0)SECTION II P.T.A 2015 EDITION For products machined directly from bar refer to ASME 9A479.
- (1)SECTION II P.T.A 2015 EDITION
- (2)SECTION II P.T.A 2015 EDITION
- (3)SECTION II P.T.A 2015 EDITION
- (4)SECTION II P.T.A 2015 EDITION
- (5)For products machined directly from bar refer also to ASTM A479.
- (6)Chemical analysis only.
- (7)ANSI/NACE MR0175/ISO 15156-3, second edition 2009-10-15 Technical circular 1:2011 Published 2011-06-14

Tolleranza: ASTM A484-16 TABLE 3

Tolleranza/Allowance/Tolérance

Pos. nr. <small>Pos. nr. Item nr. N° de poste</small>	Oggetto <small>Gegenstand Product description Description de produit</small>	Dimensioni - In <small>Abmessungen Dimension Dimension</small>	Lunghezza - In <small>Length Länge Longueur</small>		Colata <small>Schmelze Heat Coulée</small>	Pezzi <small>Stücke Pieces Pièces</small>	Peso - LB <small>Gewicht Weight Poids</small>	Lotto nr. <small>Losnr Lot nr. Lote</small>
			140/ 156	271308		11.440	612606050	
0090	Round	13,0000						

Aug 01/17

Vicenza, 18/11/16

VCC008 - MEST959057

(Mod. MCbZ) www.valbruna.com

Il collaudatore di stabilimento / der Werkstoffverständige / Works Inspector / L'agent d'usine

M. Rizzotto *[Signature]*

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10 pcs
 PO# Kevin 51853
 CPA 10 F0E80
 RTZ
 JWH



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 Delivery state
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Produttore:
 Hersteller/Hersteller/Produktions
ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: **51653 STOCK HOUSTON**

Tipo di Elaborazione: **E+AOD**
 Erweichungsart
 Melting process
 Mode d'élaboration

Marchi di Fabbrica:
 Zeichen des Lieferanten
 Trade marks
 Signes de l'usine productrice



Conferma ordine nr: **EI16011424**

Qualità: **316/316L**

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 Stempel des Werkstoffverantwortlichen
 Inspector's stamp/Pointon de l'essayeur

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Avviso di Spedizione: **D-VI16029101**

Marca: **APML**
 Markenbezeichnung
 Brand / Numéro

Punzonatura: **316/316L**
 Kennzeichnung
 Marking
 Marquage

TEST ALLO STATO DI FORNITURA

Test on delivery condition / Prüfung auf lieferbarem Produkt / Test à l'état de fourniture / Prueba sobre el material así como entregado

TEST	Proveita / Probes	°F	Poz. Saggio / Position / Essai	Snovamento / Deformation	Snovamento / Deformation	Resistenza / Tensile strength	Alungamento / Elongation	Strizione / Reduction of area	Resistenza / Impact Value	Durezza / Hardness
	Yield strength / Yield stress / Limite elastique / Rp 0,2%			Yield strength / Yield stress / Limite elastique / Rp 0,2%	Rm	E 4d	RA	RA	HB	
	min			30	-	75	40	-	50	140
	max					115				223
A	12,5	68	L	38		81	61	74		168

TEST ALLO STATO DI FORNITURA

Test on delivery condition / Prüfung auf lieferbarem Produkt / Test à l'état de fourniture / Prueba sobre el material así como entregado

TEST	min	max
A Grain size for ASTM E112		4

Mechanical properties according to ASTM A370.

Analisi chimica

Chemische Zusammensetzung / Chemical Analysis / Analyse chimique

Colore / Color	min - max	1,00	1,25	18,50	2,00	10,00	10,00	0,040	0,020	0,100			
Struttura / Structure	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %		
271308	0,014	0,41	1,74	16,74	2,00	0,42	10,07	0,142	0,030	0,026	0,084		

Corrosion test in 18% sulfuric acid and copper sulfate solutions

Test standard: **ASTM A262-Practice E**

Test	Heat treatment before test	Length of Period (h)	Test temp (°C)	Bend Angle (°)	Ø spindle (mm)	Result of visual inspection at 20 x magnification after bend test	Result
Intergranular corrosion	Sensitization	15	boil	180	5	Absence of cracks	SATISFACTORY

Produced without class I-II Ozone depleting substances.
 Solution heat treated free from continuous carbide network.
 Micro and macro etch test: OK
 Reduction ratio = 4,7 : 1
 Material annealed 1940°F for 5,5 h/water cooled.
 Material is DFARS Compliant

Sono state soddisfatte tutte le condizioni richieste
 Die gestellten Anforderungen sind erfüllt
 The material has been furnished in accordance with the requirements
 Le material a été livré conforme aux exigences

Controllo antimoscopolanza: OK
 Verschleißprüfung: spezialanalytisch durchgeführt
 Anticorrosion performance: OK
 Contrôle antimouillage: OK, r. s. s.

Controllo visivo e dimensionale: soddisfa le esigenze
 Beschäftigung und Ausmessung: ohne Beanstandung
 Visual inspection and dimensional checks satisfactory
 Contrôle visuel et dimensionnel: satisfaisant

Vicenza, 18/11/16

VCD000 - MEST959057

(Mod. MCE2)

Il collaudatore di stabilimento / der Werkstoffverantwortliche / Works Inspector / L'agent d'usine

M. Rizzotto

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Zeichen des Lieferwerkes
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 Marques de l'usine producteur



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Mercu: APML
Markenbezeichnung
 Brand / Marque

Punzonatura: 316/316L
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Melted and manufactured in Italy No welding or weld repair Material free from Mercury contamination

We declare that the finished product is checked for radioactive contamination through Portal System when it leaves the production plant.

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER ACCORDING TO ISO 9001 : 2008, ISO/TS16949 : 2009, AS 9100C

The Quality Management System is Certified acc. Pressure Equipment Directive ("97/23/EC") Annex 1.s., 4.3 and 2014/68/EU by TUEV and LLOYD'S
 Any act of tampering, modification, alteration, counterfeiting and/or falsification and/or any other action which modifies the contents 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.
 Maximal and/or Valplus grades/products are manufactured with ladle techniques to control composition, distribution, size and shape of non-metallic inclusions for improved machinability.
 The supplied product conforms to requirements expressly 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 SpA shall not be responsible for any improper use of the Products.

Vicenza, 18/11/16

VCC005 - MEST959057

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