

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

Acciaierie Valbruna s.p.a.



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

In conformità a: **EN 10204 (2004) , 3.1 / ISO 10474 (2013) , 3.1**

Certificato nr. **MEST176185 / 2017 /**

Stadio di fornitura: **Forged - Annealed FORGED**

Produttore: **ACCIAIERIE VALBRUNA S.P.A.**

Marchi di Fabbrica: **AV** **MR**

Tracce marchi: **Signes de fusino production**

Zeichen des Lieferwerkes: **Stempel des Werksachverordnungs**

Inspektor a stamp/Ingenieur de l'essayeur

Punzone del Collaudatore: **Punzonatura: 316/316L**

Qualità: **316/316L**

Vorlauf/Grundnummer: **APML**

Marka: **APML**

Markenbezeichnung: **APML**

Brand / Nuansa: **APML**

Avviso di Spedizione: **D-VH17035428**

Leberzettel/Fragung Blatt L.

Conferma ordine nr: **E117011328**

Werk/Our Order Ref. nr.

Ordine nr: **56236** **STOCK HOUSTON**

Bestell Your order Commande

Valbruna Stainless Inc. **48801 - FORT WAYNE, IN 48801 - US**

2400 TAYLOR STREET WEST

48801 - FORT WAYNE, IN 48801 - US

Cliente / Besteller/Kaufmann/Client

Stadio di fornitura: **Forged - Annealed FORGED**

Produttore: **ACCIAIERIE VALBRUNA S.P.A.**

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Cliente / Besteller/Kaufmann/Client

SPÉCIFIQUE :

Autoclaves / Requirerments / Esigencias

Note:

(0)SECTION II PTA 2015 EDITION For products machined directly from bar refer to ASME SA479.

(1)SECTION II PTA 2015 EDITION

(2)SECTION II PTA 2015 EDITION

(3)SECTION II PTA 2015 EDITION

(4)SECTION II PTA 2015 EDITION

(5)For products machined directly from bar refer also to ASTM A479.

(6)Chemical analysis only.

(7)ANSI/NACE MR0103/ISO 17945 November 23, 2015

(8)ANSI/NACE MR0175/ISO 15156-3, third edition November 23, 2015

AMS 5648 M S31600 A

AISI 316/316L

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 2015 S31600/03 A (5)

ASTM A193 2015 B8M CLASS1

ASTM A262 2015 PRACTICE E

ASTM A276 2017 S31600/03 A

ASTM A314 2015 S31600/03

ASTM A320 2017A B8M CLASS1

ASTM A370 2017

ASTM A473 2001 S31600/03 (6)

ASTM A479 2017 S31600/03 A

MIL-S-862 B/1 316/316L

NACE MR0103 2015 S31600/03 A (7)

NACE MR0175 2015 S31600/03 A (8)

QQ-S-763 F 316/316L A

Pos. nr.	Oggetto	Dimensioni - In	Lunghezza - In	Colata	Pezzi	Peso - LB	Lotto nr.
0020	Round	8.5000	173/ 216	274744	6.583	716007160	

Mar 13/18



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In conformità a: EN 10204 (2004), 3.1 / ISO 10474 (2013), 3.1

Certificato nr. MEST176185 / 2017 /
 Prüfung/Test/Essai

Cliente / Besteller/Purchaser/Client
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/Werk/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr. 56236 STOCK HOUSTON
 Bestell/Your order/Commande

Tipo di Elaborazione: E+AOD
 Erzeugnisart
 Melting process
 Mode d'elaboration

Marchi di Fabbrica:
 Zeichen des Lieferwerkes
 Trade marks
 Sigles de l'usine productrice



Conferma ordine nr. E117011328
 Werkst./Our Order/Ref. nr.

Qualità: 316/316L
 Werkstoff/Grade/Nuance

Punzone del Collaudatore:
 Stempel des Werkstoffvorständigen
 Inspector's stamp/Poligon de l'essayeur

MR

Avviso di Spedizione: D-VI17035428
 Lieferanweisung/Packing list/BL

Marca: APML
 Markenbezeichnung
 Brand / Nuance

Punzonatura: 316/316L
 Kennzeichnung
 Marking
 Marquage

TEST ALLO STATO DI FORNITURA Test on delivery condition / Prüfung auf lieferbarem produkt / test a l'etat de fourniture / Prueba sobre el material así como entregado

TEST	Provetta/ Probes Spekimen/Éprouvets Larg./diam. Spéc. Stress Diam. Dicke Wich Diam. Thickness Larg. diam. épais	°F	Posiz. Seggio Anlageort Anlageort	Snervamento Streckgrenze Yield Stress Limite élastique Rp 0,2%	Snervamento Streckgrenze Yield Stress Limite élastique	Resistenza Zugfestigkeit Tensile strength Résistance à traction Rm	Allungamento Bruchdehnung Elongation Allongement		Strizione Einmischung Reduction of area Striction	Resilienza Kerbschlagenergie Impact Value Resilience	Durezza Härte Hardness Dureté HB
							E 4d %	RA %			
Valori richiesti Anforderungen/Required values Valeurs demandées		min		30	-	75	-	40	-	50	140
A		max	L	37		115		61		71	223
A		12,5	68			81					169

TEST ALLO STATO DI FORNITURA

TEST	min	max
A Grain size for ASTM E112		4

Mechanical properties according to ASTM A370.

Analisi chimica

Colata / Heat Schmelze/Coulee	min	max	1,25	16,50	2,00	10,00	10,00	0,040	0,020	0,100				
C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %				
274744	0,016	0,34	1,75	16,63	2,01	0,49	10,06	0,150	0,032	0,028	0,095			

Corrosion test in 16% 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.
 Annealing temperature: 1940° F for 4 h/water.
 Micro and macro etch test: OK
 Reduction ratio = 7,6 : 1
 Material is DFARS Compliant

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

Controllo antimiscelazione: OK
 Verwechslungsprüfung: spezialanalytisch durchgeführt
 Antimixing testing performed: OK
 Contrôle antimélange fait: r.a.a.

Controllo visivo e dimensionale: soddisfa le esigenze
 Beschäftigt und Abmessung: ohne Beanstandung
 Visual inspection and dimensional checks: satisfactory
 Contrôle visuel et dimensions: satisfaisant

Vicenza, 15/12/17

VCC006 - MEST176185

(Mod. MCE2)

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

M. RIZZOTTO *M. Rizzotto*

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 Delivery state
 Etat de livraison

Produttore:
 Hersteller/Hersteller/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: **56236 STOCK HOUSTON**
 Bestell
 Your order
 Commande

Tipo di Elaborazione: **E+AOD**
 Erzhmeltungsart
 Melting process
 Mode d'elaboration

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



Conferma ordine nr: **EI17011328**
 Werks/Our Order/Ref nr.

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

Punzone del Collaudatore:
 Stempel des Werkssachverständigen
 Inspector's stamp/Poligon de l'essayeur

MR

Avviso di Spedizione: **D-VI17035428**
 Lieferenzettel/Packing list/B.L.

Marca: **APML**
 Markenbezeichnung
 Brand / Numéro

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

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, IATF 16949 : 2016, 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, 15/12/17

VCQ008 - MEST176185

(Mod. MCE2) VSPB185F61765C4703C7021104FF871

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

M. RIZZOTTO

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