

HT# 271064

1/3



Acciaierie Valbruna S.p.A.

36100 VICENZA (Italia) - Viale della scienza, 25 z.l.
 Telefono 0444.966211 - 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

Certificato nr. MEST951034 / 2016 /

Ciente / Besteller/Purchaser/Client
VALBRUNA CANADA LTD
 8724 HOLTGATE CRESCENT
 L5T 5Z1 - MILTON, ONT L5T 5Z1 - CA

Stato di fornitura: Forged - Annealed FORGED

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

Ordine nr. 606005847 Stock - Canada

Tipo di Elaborazione: E+AOD

Marchi di Fabbrica:
 Zeichen des Lieferwerkes
 Trade mark
 Sigles de l'usine producteur



Conferma ordine nr. EI16006569

Qualità: 316/316L

Funzione del Collaudatore:
 Stempel des Werkssachverständigen
 Inspector's stamp/Fonction de l'essayeur

MR

Avviso di Spedizione: D-VI16027621

Marca: APML

Funzionatura: 316/316L

SPECIFICHE:	Note:
Anforderungen / Requirements / Exigences	Aufzeichnungen / Notes / Notes
VSI 0 316/316L A AISI 316/316L AMS 5648 L 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 PT.A 2015 EDITION For products machined directly from bar refer to ASME SA479. (1)SECTION II PT.A 2015 EDITION (2)SECTION II PT.A 2015 EDITION (3)SECTION II PT.A 2015 EDITION (4)SECTION II PT.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

Pos. nr.	Oggetto	Dimensioni - In	Lunghezza - In	Colata	Pezzi	Peso - LB	Lotto nr.
Part. n. Part. n. No. de pièce	Component Product description Description de produit	Dimensions Dimension Dimension	Length Length Longueur	Shim Mold Casse	Quantity Pieces Pièces	Weight Wight Poids	Lot n. Lot n. Lot n.
0020	Round	8,5000	225/ 225	271064	1	3,719	617406110

P.O.#: PI15476
 R#: R141832
 ITEM#: 509378
 HEAT#: 271064
 BRANCH#: 875

Mar 28/18



Acciaierie Valbruna S.p.A.

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 Telefono 0471.924111 - Fax 0471.924497

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

In conformità a: **EN 10204 (2004), 3.1**

Certificato nr. **MEST951034 / 2016 /**

Nashi/According to/Diekin

Prüfung/Tests/Essai

Cliente / Besteller/Purchaser/Cliënt
VALBRUNA CANADA LTD
 8724 HOGGATE CRESCENT
 L5T 5Z1 - MILTON, ONT L5T 5Z1 - CA

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

Produttore :
Hersteller/Herstellername/produzione
ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: **606005847 Stock - Canada**
Bestell
 Your order
 Comments

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

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



Conferma ordine nr: **EI16006569**
Werk/Our Order/Ref. nr.

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

Punzone del Collaudatore:
Stempel des Werksschwerstündigen
 Inspector's stamp/Position de l'essayeur

MR

Avviso di Spedizione: **D-VI16027621**
Lieferfrist/Packing list/B.L.

Marca: **APML**
Markenbezeichnung
 Brand / Nuance

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

TEST ALLO STATO DI FORNITURA

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

TEST	Prova/Prüfung <small>Essai/Prüfung</small>	Ø F	Posto/Saggio <small>Position/Lagepunkt</small>	Snervamento <small>Streckgrenze Yield Stress Limite élastique Rp 0,2%</small>	Snervamento <small>Streckgrenze Yield Stress Limite élastique</small>	Resistenza <small>Zugfestigkeit Tensile strength Résistance à traction</small>	Allungamento <small>Bruchdehnung Elongation Allongement</small>		Strizione <small>Erweichung Reduction of area Écrouissage</small>	Resilienza <small>Kerbschlagarbeit Impact Value Resilience</small>	Durezza <small>Hardness Dureté HB</small>
							E 4d %	RA %			
Valori richiesti <small>Anforderung/Required values Valeur demandées</small>		min max		30	-	75 115	-	40	-	50	140 223
A	12,5	68	L	37		82		62		74	168

TEST ALLO STATO DI FORNITURA

Test on delivery condition / Prüfung auf lieferbarem produkt / Test a 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

Colata / Heat <small>Schmelze/Casta</small>	min - max	1,25 2,00	16,50 18,00	2,00 3,00	1,00	0,00 4,00	0,00 0,040	0,00 0,030	0,00 0,100	-	-	-
	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %	
271064	0,017	0,36	1,78	16,78	2,02	0,44	0,01	0,139	0,030	0,030	0,076	

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

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

Controllo antimiscelazione: OK
Verwechslungsrisiko: geprüft/analytisch durchgeführt
 Antimixing testing performed OK
 Contrôle antimitage fait. S.S.

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

Vicenza, 07/11/16

VCC005 - MEST951034

(Mod. MCE2) NON FIRMARE PRIMA DI COLLAUDARE

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

M. Rizzotto *[Signature]*

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In conformità a: **EN 10204 (2004), 3.1**

Certificato nr. **MEST951034 / 2016 /**

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VALBRUNA CANADA LTD
8724 HOLTGATE CRESCENT
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Stato di fornitura :
 Lieferzustand
 Delivery state
 Etat de livraison

Forged - Annealed FORGED

Produttore :
 Hersteller/Hersteller
ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 606005947 Stock - Canada
 Bestell
 Your order
 Commande

Tipo di Elaborazione:
 Erzeugnisbezeichnung
 Making process
 Mode d'élaboration

E+AOD

Marchi di Fabbrica:
 Zeichen des Ueferwerkers
 Trés de marque
 Marques de l'usine productrice



Conferma ordine nr: EI16006569
 Wiederholer Order/Retel.

Qualità:
 Werkstoff/Grade/Qualité

316/316L

Punziona del Collaudatore:
 Stempel des Werkstoffverständigen
 Inspecteur's Stamp/Plaque de l'essayeur

MR

Avviso di Spedizione: D-VI16027621
 Lieferzustand/Shipping list/B.L.

Marca:
 Markenbezeichnung
 Brand / Marque

APML

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, 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, 07/11/16
 VC0005 - MEST951034
 (Mod. MCE2)

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

M. Rizzotto

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