



# Acciaierie Valbruna S.p.A.

36100 VICENZA (Italia) - Viale della scienza, 25 z.i.  
 Telefono 0444.988211 - Fax 0444.963836  
 Slab.; 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 / ISO 10474 (2013), 3.1**  
 Nach/According to/Selon

Certificato nr. **MEST548260 / 2020 /**  
 Prüfungs/Tesst/Essai

Cliente / Bostelle/Purchaser/Cliant  
**VALBRUNA CANADA LTD**  
**8724 HOLGATE CRESCENT**  
**L5T 5Z1 - MILTON, ONT L5T 5Z1 - CA**

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

Produttore:  
 Hersteller/Werks/Usine productrice

**ACCIAIERIE VALBRUNA S.P.A.**

Ordine nr: **002007881 Stock - Canada**  
 Bestell  
 Your order  
 Commande

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

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



Conferma ordine nr: **EI20001185**  
 Works/Our Order/Ref. nr.

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

Punzone del Collaudatore:  
 Stempel des Werkes sachverständigen  
 Inspector's stamp/Plaqueon de l'essayeur

**MR**

Avviso di Spedizione: **D-VI20008299**  
 Lieferanfrage/Packing Instruk.

Marca: **MVAPML (MAXIVAL)**  
 Markenbezeichnung  
 Brand / Nuance

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

### SPECIFICHE :

Note:

Anforderungen / Requirements / Exigences

Aufzeichnungen / Notes / Notas

VSI 0, 316/316L A  
 AISI 316/316L  
 AMS 5648 M S31600 A  
 AMS 5653 J S31603 A  
 AMS-QQ-S-763 D 316/316L A  
 ASME SA182 2019 S31600/03 A (0)  
 ASME SA193 2019 B8M CLASS 1 (1)  
 ASME SA276 2019 S31600/03 A (2)  
 ASME SA320 2019 B8M CLASS 1 (3)  
 ASME SA479 2019 S31600/03 A (4)  
 ASTM A182 2019 S31600/03 A (5)  
 ASTM A193 2019 B8M CLASS 1  
 ASTM A262 2015 PRACTICE E  
 ASTM A276 2017 S31600/03 A  
 ASTM A314 2019 S31600/03  
 ASTM A320 2018 B8M CLASS 1 CLASS 1  
 ASTM A370 2015 (6)  
 ASTM A473 2001 S31600/03 (7)  
 ASTM A479 2019 S31600/03 A  
 MIL-S-862 B/1 316/316L  
 NACE MR0103 2015 S31600/03 A (8)  
 NACE MR0175 2015 S31600/03 A (9)  
 QQ-S-763 F 316/316L A

(0)Section II Part A 2019 EDITION For products machined directly from bar refer to ASME SA479.

(1)Section II Part A 2019 EDITION

(2)Section II Part A 2019 EDITION

(3)Section II Part A 2019 EDITION

(4)Section II Part A 2019 EDITION

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

(6)2015E1

(7)Chemical analysis only.

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

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

**R219015**  
**509375**  
**Load # 51310**

Tolleranza: ASTM A484-19 TABLE 3

Tolerance/Allowance/Tolérance

Pos. nr. Pos. nr. Item nr. Nr. de série	Oggetto Component Produit de fabrication Composé de produit	Dimensioni - In Abmessungen Dimensions	Lunghezza - In Länge Length Langueur	Colata Schmelze Melt Coulée	Pezzi Stücken Pieces Pièces	Peso - LB Gewicht Weight Poids	Lotto nr. Losn. Lot nr. Lot no.
0050	Round	7,5000	140/ 140	<b>292389</b>		1,845	924608410

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER ACCORDING TO ISO 9001 : 2015, IATF 16949 : 2016, AS 9100D

Vicenza, **22/04/2020**  
 VCCQ352 - MEST548260

Direzione Qualità  
 Qualitätsmanagement/Quality Management/Qualität  
**R.BERTELLI**

Direzione Prodotto  
 Produktmanagement/Product Management/Direction Produit  
**P.MESSORI**

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*ANS*



# Acciaierie Valbruna S.p.A.

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

Certificato nr. MEST548260 / 2020 /  
Prüfung/Test/Essai

Cliente / Besteller/Purchaser/Client  
VALBRUNA CANADA LTD.  
8724 HOLGATE CRESCENT  
L5T 5Z1 - MILTON, ONT L5T 5Z1 - CA

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

Produttore:  
Hersteller/Hersteller/Usine producteur

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 002007881 Stock - Canada  
Bestell  
Your order  
Commande

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

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



Conferma ordine nr: EI20001185  
Werk/Our Order/Ref nr:

Qualità: 316/316L  
Werkstoff/Grade/Qualite

Punzone del Collaudatore:  
Stempel des Verfassungsverständigen  
Inspector's stamp/Plombon de l'essayeur

MR

Avviso di Spedizione: D-VI20008299  
Lieferschein/Packing label.

Marcato: MVAPML (MAXIVAL)  
Markenbezeichnung  
Brand / Marque

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	Prova/Prüfung	°F	Spessore/Epaisseur	Snervamento/Bruchgrenze	Snervamento/Bruchgrenze	Resistenza/Bruchfestigkeit	Allungamento/Bruchdehnung	Strizione/Reduktion der Querschnittsfläche	Resilienza/Resilienz	Durezza/Härte
	Specimen/Probekörper									
Valori richiesti		min		30	-	75	40	-	50	140
Abforderung/Anforderung		max				115				223
A	12,5	68	L	39		84	61		71	170

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												
Colata/Heat	min	1,25	16,80	2,00	10,00	0,040	0,020	-	-	-	-	-
Schmelze/Condit	max	0,030	18,00	3,00	14,00	0,030	0,100	-	-	-	-	-
	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %	
282389	0,022	0,45	1,70	16,80	2,02	0,50	10,23	0,127	0,031	0,023	0,075	

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.  
Material annealed 1940°F for 3.5h/water cooled.  
Reduction ratio = 9,3 : 1  
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 matériel a été trouvé conforme aux exigences

Controllo animescolanza: OK  
Vermischungsprüfung: spektroskopisch durchgeführt  
Anilming testing performed: OK  
Controllo animescolanza: OK

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

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER ACCORDING TO ISO 9001 : 2015, IATF 16949 : 2016, AS 9100D			
Vicenza, 22/04/2020 VQ0052 - MEST548260	Direzione Qualità Qualitätsmanagement/Quality Management/Qualité Control R.BERTELLI	Direzione Prodotto Produktmanagement/Product Management/Direction Produit P.MESSORI	Pagina 2 di 3



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L5T 5Z1 - MILTON, ONT L5T 5Z1 - CA

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Lieferzustand  
Delivery state  
Etat de livraison

Produttore:  
Hersteller/Hersteller/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 002007661 Stock - Canada  
Bestell  
Your order  
Commande

Tipo di Elaborazione: E+AOD  
Erhitzungsart  
Annealing process  
Mode d'elaboration

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



Conferma ordine nr: EI20001185  
Werk/Dur Order/Ref nr.

Qualità: 316/316L  
Werkstoff/Grade/Nozance

Punzone del Collaudatore:  
Stempel des Werksschwerstängigen  
Inspector's stamp/Pointon de l'essayeur

MR

Avviso di Spedizione: D-VI20008299  
Lieferanzug/Packung ist/B.L.

Marca: MVAPML ( MAXIVAL )  
Markenbezeichnung  
Brand / Marque

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 by the portal system when it leaves the production plant.

The Quality Management System is also Certified according Pressure Equipment Directive 2014/68/EU Annex 1, chap. 4.3 by TÜV 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.  
Maxival 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.

### QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER ACCORDING TO ISO 9001 : 2015, IATF 16949 : 2016, AS 9100D

Vicenza, 22/04/2020  
VCC0052 - MEST548260

Direzione Qualità  
Qualitätsmanagement/Quality Management/Direction Qualité  
R.BERTELLI

Direzione Prodotto  
Produktmanagement/Product Management/Direction Produit  
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