



# Acciaierie Valbruna S.p.A.

36100 VICENZA (Italia) - Viale della scienza, 25 z.i.  
 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 / ISO 10474 (2013), 3.1**

Certificato nr. **MEST703859 / 2021 /**

Nach/According to/Seien

Prüfung/Testing/

Cliente / Besteller/Purchaser/Client  
**VALBRUNA CANADA LTD**  
 5724 HOLTGATE CRESCENT  
 L5T 5Z1 - MILTON, ONT L5T 5Z1 - CA

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

Produttore:  
 Hersteller/Item/Usine productrice

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

Ordine nr. 012008394 Stock - Canada  
 Bestell  
 Your order  
 Commande

Tipo di Elaborazione: **E+AOD**  
 Erhmelungsart  
 Milling process  
 Mode d'elaboration

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



Conferma ordine nr. **EI20010999**  
 Wers/Our Order/Ref. nr.

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

Punzone del Colleudatore:  
 Stempel des Werkstschvorständigen  
 Inspector's stamp/Pointon de l'essayeur

**MR**

Avviso di Spedizione: **D-VI210C6605**  
 Lieferanzeige/Packing list/B.L.

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

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

### SPECIFICHE :

Anforderungen / Requirements / Exigences

### Note:

Aufzeichnungen / Notes / Notes

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 CLASS1 (3)  
 ASME SA479 2019 S31600/03 A (4)  
 ASTM A182 2020 S31600/03 A (5)  
 ASTM A193 2019 B8M CLASS 1  
 ASTM A262 PR. E 2015 316/316L  
 ASTM A276 2017 S31600/03 A  
 ASTM A314 2019 S31600/03  
 ASTM A320 2018 B8M CLASS 1 CLASS1  
 ASTM A370 2020 . (6)  
 ASTM A473 2019 S31600/03 (7)  
 ASTM A479 2020 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)2019E1  
 (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

Tolleranza: ASTM A484-20B TABLE 3

Tolleranza/Allowance/Tolerance

Pos. nr. Pos. nr. N. de poste	Oggetto Description Description, au produit	Dimensioni - In		Lunghezza - In	Colata	Pezzi	Peso - LB	Lotto nr.
		Abmessungen Dimension Dimension		Length Länge Longueur	Shimada Host Celle	Stückzahl Pieces Pieces	Gewicht Weight Poids	Lot nr. Lot nr.
0050	Round	6,2500		165/ 165	433405	2	2.943	128206890

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

Vicenza, **17/03/2021**  
 VQC052 - MEST703859

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

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

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 Prüfung/Test/Essai

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**VALBRUNA CANADA LTD**  
 8724 HOLGATE CRESCENT  
 L5T 5Z1 - MILTON, ONT L5T 5Z1 - CA

Stato di fornitura: Hot rolled - Annealed Peeled  
 Lieferzustand: Delivery state: Etat de livraison

Produttore:  
 Hersteller/Item/Usine productrice

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

Ordine nr: 012008394 Stock - Canada  
 Bestell: Your order: Commande

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

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



Conferma ordine nr: EI20010999  
 Werks/Our Order/Ref nr.

Qualità: 315/316L  
 Werkstoff/Grade/Nuance

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

MR

Avviso di Spedizione: D-VI21006605  
 Lieferanzeige/Packing list/B.L.

Marca: MVAPML ( MAXIVAL )  
 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 asi como entregado																				
TEST	Provetta/ Probe/Tabl Specimen/Essouvette Larg./diam. Spec. Brefle Diam. Dicks Width Diam. Thickness Larg./diam. epais. mm	Posiz. Saggio Procege Linsen Einrichtung	Snervamento Yield Stress Limite elastique Rp 0,2%	Snervamento Yield Stress Limite elastique	Resistenza Tensile strength Resistance a traction Rm	Allungamento Strechung Elongation Allongement	Strizione Einschnürung Reduction of area Striction	Resilienza Kerbschlagwert Impact Value Resilience	Durezza Härte Hardness Cureté HB	Valori richiesti Anforderungen/Required values Vale as demandes										
											min	max	30	-	75	-	40	-	50	-
A	12,5	68	L	39		83		62		74										167

TEST ALLO STATO DI FORNITURA			
Test on delivery condition / Prüfung auf lieferbarem produkt / Test a l'etat de fourniture / Prueba sobre el material asi 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												
Coala Schmelze/Coulee	Heat max	min	1,25	16,50	2,00	1,00	16,00	0,040	0,020	0,100		
C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %		
433405	0,015	0,51	1,74	16,89	2,09	0,55	10,20	0,093	0,031	0,024	0,071	

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-HI Ozone depleting substances.  
 Solution heat treated free from continuous carbide network.  
 Material annealed 1940°F for 3h/water cooled.  
 Micro and macro etch test: OK.  
 Reduction ratio = 11,1 : 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 antimascolanza con tecnica XRF/OES portatile : OK  
 Verwachsungsprüfung: durch XRF/OES Gerät geföhrt  
 Antimixing testing performed with XRF/OES portable: OK  
 Contrôle antimélange svt technique XRF/OES portable : OK

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

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER ACCORDING TO ISO 9001 : 2015, IATF 16949 : 2016, AS 9100D			
Vicenza, 17/03/2021 VQC052 - MEST703859	Direzione Qualità Qualitätsmanagement/Quality Management/Qualité Qualité R.BERTELLI	Direzione Prodotto Produktmanagement/Product Management/Direction Produit P.MESSORI	Pagina 2 di 3

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Trade marks  
Sigles de l'usine productrice



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Kennzeichnung  
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Marquage

Melted, poured 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, chapt.4.3 by TLV 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.

MSR/MSF/10406780/CFP/1003244596AA/120

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER ACCORDING TO ISO 9001 : 2015, IATF 16949 : 2016, AS 9100D			
Vicenza, 17/03/2021 VCQ052 - MEST703859	Direzione Qualità Quality Management/Quality Management/Gestion Qualité R.BERTELLI	Direzione Prodotto Product Management/Product Management/Direction Produit P.MESSORI	Pagina 3 di 3

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