



Acciaierie Valbruna S.p.A.

36100 VICENZA (Italia) - Viale della scienza, 25 z.l.
Telefono 0444.968211 - Fax 0444.963636
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. MEST834861 / 2021 /
Prüfung/Prüfbescheinigung

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

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

Produttore:
Herstellerteil/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr. 110009087 Stock - Canada
Bestell
Your order
Commande

Tipo di Elaborazione: E+AOD
Eisenherstellungsart
Melting process
Mode de fabrication

Marchi di Fabbrica:
Zeichen des Lieferwerkes
Trade marks
Siglas de Usine productrice



Conferma ordine nr. EI21013696
Werkst/Our Order/Ref. n.

Qualità: 316/316L
Werkstoff/Grade/Nuance

Posizione del Collaudatore:
Stempel des Verlässchwerstänigen
Inspector's stamp/Position de l'essayeur

MR

Avviso di Spedizione: D-VI21027553
Lieferanzeiger/Packing list/V.B.L.

Marca: MVAPML (MAXIVAL)
Markenbezeichnung
Brand / Nuance

Posizionatura: 316/316L
Kennzeichnung
Marking
Marquage

SPECIFICHE :	Note:
Anforderungen / Requirements / Exigences	Aufzeichnungen / Notes / Notes
VSI 0, 316/316L A	
AISI 316/316L	
AMS 5648 M S31600 A	
AMS 5653 J S31603 A	
AMS-QQ-S-753 D 316/316L A	
ASME SA182 2019 S31600/03 A (0)	(0)Section II Part A 2019 EDITION For products machined directly from bar refer to ASME SA479.
ASME SA193 2019 B8M CLASS 1 (1)	(1)Section II Part A 2019 EDITION
ASME SA276 2019 S31600/03 A (2)	(2)Section II Part A 2019 EDITION
ASME SA320 2019 B8M CLASS 1 CLASS1 (3)	(3)Section II Part A 2019 EDITION
ASME SA479 2019 S31600/03 A (4)	(4)Section II Part A 2019 EDITION
ASTM A182 2021 S31600/03 A (5)	(5)For products machined directly from bar refer also to ASTM A479.
ASTM A193 2020 B8M CLASS 1	
ASTM A262 PR. E 2015 316/316L (6)	(6)Reapproved 2021
ASTM A276 2017 S31600/03 A	
ASTM A314 2019 S31600/C3	
ASTM A320 2018 B8M CLASS 1 CLASS1	
ASTM A370 2020	
ASTM A473 2021 S31600/C3 (7)	(7)Chemical analysis only.
ASTM A479 2020 S31600/C3 A	
MIL-S-862 B/1 316/316L	
NACE MRO'03 2015 S31600/03 A (8)	(8)ANSI/NACE MRC103/ISO 17945 November 23, 2015
NACE MRO'75 2015 S31600/03 A (9)	(9)ANSI/NACE MRC175/ISO 15155-3, third edition November 23,2015
QQ-S-763 F 316/316L A	

Tolleranza: ASTM A484-20B TABLE 3

Pos. nr. Pos. nr. en. nr. Nr. de poste	Oggetto Objets Product description Design. du produit	Tolleranza/Allowance/Tolerance		Lunghezza - In Length Longueur	Colata Schmelz Melt Coulée	Pezzi Eckzahl Pieces Pièces	Peso - LB Gewicht Weight Poids	Lotto nr. Lot Lot Loter.
		Dimensioni - In Dimensions Dimension						
0010	Round	5,0000		157/ 158	435056	4	3.556	124310810

P.O.#: PI23925
 R#: R171255
 ITEM#: 509364
 HEAT#: 435056
 BRANCH#: 875

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

Vicenza, 10/11/2021 VQ0052 - MEST834861	Direzione Qualità Qualitätsmanagement/Quality Management/Qualité R.BERTELLI <i>Bertelli</i>	Direzione Prodotto Produktmanagement/Product Management/Direction P.MESSORI <i>Messori</i>	Pagina 1 di 3
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1/19/2022

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. MEST834861 / 2021 /
 Prüfung/Test/Essai

Cliente / Besteller/Purchaser/Client
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/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 110009087 Stock - Canada
 Bestel/Your order/Commande

Tipo di Elaborazione: E+AOD
 Erhmelzungsart: Rolling process: Mode d'elaboration

Marchi di Fabbrica:
 Zeichen des Lieferwerkes
 Trade marks
 Sigles de fusine productrice



Conferma ordine nr: EI21013696
 Works/Our Order/Ref. nr.

Qualità: 316/316L
 Werkstoff/Grade/Eivalence

Punzone del Collaudo:
 Stempel des Werkstoffverständiger:
 Inspector's stamp/Pointon de l'inspecteur

MR

Avviso di Spedizione: D-VI21027559
 Lieferanweisung/Packing list/V.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'état de fourniture / Prueba sobre el material así como entregado											
TEST	Provetta/ Sampone/Éprouvette Lap. diam. Spess. 3 x 6 x 3 mm. Dia. Width Diam. Thickness Lap. diam. Spess. mm.	Posiz. Saggio Prüfung Position Éprouvettes	Snervamento Dehnung Field Stress L. mm. elongation Rp 0,2%	Snervamento Streckgrenze Yield Stress Limite élastique	Resistenza Zugfestigkeit Tensile strength Résistance à traction Rm	Allungamento Bruchdehnung Elongation Allongement	Strizione Einschnürung Reduction of area Striction	Resilienza Kerbschlagarbeit Impact Value Resilience	Durezza Härte Hardness Dureté HB		
Valori richiesti		min max	30	-	75 115	- 40	- 50	-	140 223		
A	12,5	68 L	38		82	63	76		165		

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												
Coletta / Heat / Schmelze/Coulee	min - max	1,25	18,50	2,00	10,00	14,00	0,04C	0,023	0,033	0,100		
		C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %
435056	0,030	0,011	0,52	1,66	16,92	2,04	0,59	10,30	0,107	0,029	0,026	0,072

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 = 19,3 : 1
 Material annealed 1978°F for 180'(total time)/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 matériel a été trouvé conforme aux exigences	Controllo antimiscelazione con tecnica XRF/OES portatile : OK Verwechslungsprüfung durch XRF/OES Gerät geführt. Anti mixing testing performed with XRF/OES portable : OK Contrôle anti-mélange svr techn. qv 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 dimensionnel satisfaisant
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QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER ACCORDING TO ISO 9001 : 2015, IATF 16949 : 2016, AS 9100D			
Vicenza, 10/11/2021 VCC052 - MEST834861	Direzione Qualità Qualitätsmanagement/Quality Management/Direction Qualité R.BERTELLI	Direzione Prodotto Produktmanagement/Product Management/Direction Produit P.MESSORI	Pagina 2 di 3

CUSTOMER/WMW MACHINING Ord. # S272022 File:00001 Cust. # 6067-103



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Certificato nr. MEST834861 / 2021 /
Prüfung/Teszt/Essai

Nach/According to/Selon

Cliente / Besteller/Purchaser/Client
VALBRUNA CANADA LTD
8724 HOLGATE CRESCENT
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Lieferzustand
Delivery state
Etat de livraison

Produttore :
Hersteller/Hersteller/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr. 110009087 Stock - Canada
Bestell
Your order
Commande

Tipo di Elaborazione: E+AOD
Eischem-Zustand
Melting process
Mode d'elaboration

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



Conferma ordine nr. EJ21013696
Werkstoff/Order/Ref. n.

Qualità: 316/316L
Werkstoff/Grade/Qualité

Punzone del Collaudo:
Stempel des Werkstoffprüfungsingenieurs
Inspector's stamp/Pointon de l'essai

MR

Avviso di Spedizione: D-VI21027559
Lieferanzeige/Packing list/B.L.

Marca: MVAPML (MAXIVAL)
Markenbezeichnung
Brand / Nunce

Punzonatura: 316/316L
Kennzeichnung
Marking
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 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.

WFORM MEST834861/2021/00000001/0000

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

Vicenza, 10/11/2021
VQC052 - MEST834861

Direzione Qualità
Quality Management/Quality Management/Gestion Qualité
R. BERTELLI

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

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