



Acciaierie Valbruna S.p.A.

36100 VICENZA (Italia) - Viale della scienza, 25 z.l.
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CERTIFICATO DI COLLAUDO - ABNAHMEPRUEFZEUGNIS - INSPECTION CERTIFICATE - CERTIFICAT DE RECEPTION

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

Certificato nr. MEST706191 / 2021 /

Nach/According to/Belon

Prüfung/Tests/Essai

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

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

Produttore:
 Hersteller/Item/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 101008440 P121969-875 ENC
 Bestell
 Your order
 Commande

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

Marchi di Fabbrica:
 Zeichen der Lieferwerke
 Trade marks
 Sigles de l'usine productrice



Confirma ordine nr: **EI21000538**
 Works/Our Order/Ref. nr.

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

Punzone del Collaudatore:
 Stempel des Werksachverständigen
 Inspector's stamp/Pointeur de l'assesseur

MR

Avviso di Spedizione: **D-VI21007029**
 Lieferanzüge/Packing list/B.L.

Marca: **APML**
 Markenbezeichnung
 Brand / Nuance

Punzonatura: **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-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

Pos. nr. *Pos. nr. Item nr. Nr. de poste	Oggetto Objektstand Product description Descr. du produit	Tolleranza/Allowance/Tolerance						Lotto nr. Lose Lot nr. Lot nr.
		Dimensioni - In Abmessungen Dimension Dimension	Lunghezza - In Länge Length Longueur	Colata Schmelze Heat Coulée	Pezzi Stückzahl Pieces Pièces	Peso - LB Gewicht Weight Poids		
0010	Round	15,0000	185/ 185	285013		9.489	100716991	

P.O.#: **P121969**

R.#: **R166713**

ITEM#: **527249**

HEAT#: **285013**

BRANCH#: **875**

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

Vicenza, 23/03/2021 VCC052 - MEST706191	Direzione Qualità Qualitätsmanagement/Quality Management/Gestion Qualité R.BERTELLI	Direzione Prodotto Produktmanagement/Product Management/Direction Produit P.MESSORI	Pagina 1 di 3
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Acciaierie Valbruna S.p.A.

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 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. MEST706191 / 2021 /
Prüfung/Toit/Vessal

Cliente / Besteller/Purchaser/Client VALBRUNA CANADA LTD 8724 HOLLGATE CRESCENT L5T 5Z1 - MILTON, ONT L5T 5Z1 - CA	Stato di fornitura: Forged - Annealed Pealed Lieferzustand Delivery state Etat de livraison	Produttore: Hersteller/Hersteller ACCIAIERIE VALBRUNA S.P.A.
Ordine nr: 101008440 P121989-875 ENC Bestell- / Your order / Commande	Tipo di Elaborazione: E+AOD Erzeugnisart Melting process Mode d'elaboration	Marchi di Fabbrica: Zeichen des Lieferanten Trade marks Sigles de l'usine productrice
Conferma ordine nr: EI21000538 Wirkt/Our Order/Ref. nr.	Qualità: 316/316L Werkstoff/Grade/Ruance	Punzone del Collaudatore: Stempel des Werkstoffverständigen Inspector's stamp/Plaqueon de l'essayeur
Avviso di Spedizione: D-VI21007029 Lieferanweisung/Packung BsvB.L.	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	Provatta/ Probe Spezialprüfprobe Logform Spec. Zweifl. Dim., Dicks. Weld Dim., Thickness Log. diam., spec. mm	F	Pess. Saggio Proben Längen Cylinder h	Snervamento Bruchgrenze Yield stress Limite elasticoo Rp 0,2% kcal.	Snervamento Streckgrenze Yield stress Limite elasticoo kcal.	Resistenza Zugfestigkeit Tensile strength Resistance à traction Rm kcal.	Allungamento Bruchdehnung Elongation Allongement E 4d %		Strizione Verformung Reduction of area Sollition RA %		Resilienza Kerbschlagarbeit Impact Value Resilience	Durezza Härte Dureté HB
							min	max	min	max		
Valori richiesti Anforderungen/Required values Valeurs demandées				30	-	75	-	40	-	50	-	140
A	12,5	68	L	39		81		59		75		188

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	min	max	
A Grain size for ASTM E112			4

Mechanical properties according to ASTM A370.

Analisi chimica														
Chemische Zusammensetzung/Chemical Analysis/Analyse chimique														
Colata / Afalt Schmelze/Coufée	mm - max 0,030	1,00	1,25 2,00	16,60 18,00	2,00 3,00	1,00	10,00 14,00	-	0,040	0,020 0,030	0,100	-	-	-
	C %	SI %	Mn %	Cr %	Mo %	Cu %	NI %	Co %	P %	S %	N %			
285013	0,022	0,47	1,71	16,60	2,04	0,77	10,00	0,120	0,031	0,027	0,090			

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 = 9,6 : 1
 Material annealed 1940°F for 7h/water cooled.
 Material is DFARS Compliant

Sono state soddisfatte tutte le condizioni richieste Die speziellen Anforderungen sind h. Anlage erfüllt The material has been furnished in accordance with the requirements Le matériel a été livré conforme aux exigences	Controllo antimiscelazione con tecnica XRF/OES portatile : OK Vermischungsprüfung durch XRF/OES Gerät gelohnt. Antidiluting testing performed with XRF/OES portable : OK Contrôle antimélange sur technique XRF/OES portable : OK	Controllo visivo e dimensionale; soddisfa le esigenze Beifügung und Auermessung, ohne Beanstandung Visual inspection and dimensional checks:satisfactory Contrôle visuel et dimension: satisféant
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QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER ACCORDING TO ISO 9001 : 2015, IATF 16949 : 2016, AS 9100D			
Vicenza, 23/03/2021 VCQ062 - MEST706191	Direzione Qualità Qualitätsmanagement/Quality Management/Direction Qualité R.BERTELLI	Direzione Prodotto Produktmanagement/Product Management/Direction Produit P.MESSORI	Pagina 2 di 3



Acciaierie Valbruna S.p.A.

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Certificato nr. MEST706191 / 2021 /

Nach/According to/Selon

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 Peeled
 Lieferzustand
 Delivery state
 Etat de livraison

Produttore :
 Hersteller/Werk/Urspr. produzent

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 101008440 P121969-875 ENC
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Tipo di Elaborazione: E+AOD
 Erzeugnisart
 Melting process
 Mode d'elaboration

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



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Qualità: 316/316L
 Werkstoff/Grade/Nuance

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

MR

Avviso di Spedizione: D-VI21007029
 Lieferanzüge/Packing list/V.B.L.

Marcas: APML
 Markenbezeichnung
 Brand / Marque

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.
 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.

VERIFICARE IL MARCHIO QUALITÀ

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

Vicenza, 23/03/2021
 VCC052 - MEST706191

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

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

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