



Acciaierie Valbruna S.p.A.

36°00 VICENZA (Italia) - Viale della scienza, 26/1
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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. **MEST003214 / 2022 /**

Cliente / Buyer/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/Hersteller/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr. **112009227 RELIANCE PROGRA**
 Your order
 Commande nr.

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

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



Confirma ordine nr. **EI21016478**
 Werkstücknummer:

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

Punzone del Collaudatore:
 Stempel des Werkstoffverständigen:
 Inspector's stamp/Plaqueon du Tauxsayeur

MR

Avviso di Spedizione: **D-VI22006065**
 Lieferzeitpunkt/Notice for 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	
ANSI 316/316L	
AMS 5648 M S31600 A	
AMS 5653 J S31603 A	
AMS-OO-S-753 D 316/316L A	
ASME SA 107 2021 S31600/03 A (0)	(0)Section II Part A 2021 EDITION For products machined directly from bar refer to ASME SA 475
ASME SA 103 2021 B8M CLASS 1 (1)	(1)Section II Part A 2021 EDITION
ASME SA 175 2021 S31600/03 A (2)	(2)Section II Part A 2021 EDITION
ASME SA 321 2021 B8M CLASS 1 CLASS 1 (3)	(3)Section II Part A 2021 EDITION
ASME SA 475 2021 S31600/03 A (4)	(4)Section II Part A 2021 EDITION
ASTM A 302 2021 S31600/03 A (5)	(5) For products machined directly from bar refer also to ASTM A 475
ASTM A 193 2020 B8M CLASS 1	
ASTM A 262 PR. E 2015 316/316L (6)	(6)Reapproved 2021
ASTM A 276 2017 S31600/03 A	
ASTM A 314 2019 S31600/03	
ASTM A 329 2018 B8M CLASS 1 CLASS 1	
ASTM A 370 2021	
ASTM A 473 2021 S31600/03 (7)	(7)Chemical analysis only.
ASTM A 479 2021 S31600/03 A	
MIL-S-862 B/1 316/316L	
NACE MRC 103 2015 S31600/03 A (8)	(8)ANSI/NACE MR0103/ISO 17948 November 23, 2015
NACE MR0175 2015 S31600/03 A (9)	(9)ANSI/NACE MR0175/ISO 15156-3, third edition November 23, 2015
CO-S-763 F 316/316L A	

P.O.#: **P125047**
 R#: **R174488**
 ITEM#: **521534**
 HEAT#: **287395**
 BRANCH#: **875**

Pos. nr. Pos. nr. nr. de position	Oggetto Objekt Produit des clients Objet de travail	Tolleranza, ASTM A484-20B TABLE 3		Lunghezza - In Länge Length Longueur	Colata Schmelze Cast Coulée	Pezzi Stücke Pieces Pièces	Peso - LB Gewicht Weight Poids	Lotto nr. Lot Lot Lote	
		Tolerance/Allowance/Tolérance							
		Dimensioni - In Abmessungen Dimension Dimension							
0080	Round	13,0000		132/ 132		287395		5.117	124013500

Provided by CPA

www.flowconditioner.com,info@cpacl.ca 7/5



Acciaierie Valbruna S.p.A.

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 Telefono 0471.824111 - Fax 0471.924487

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

Certificato nr. MEST003214 / 2022 /
 Prüfung/Test/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/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr. 112009227 RELIANCE PROGRA
 Bestell
 Your order
 Commande

Tipo di Elaborazione: E+AOD
 Erzeugnisart
 Making process
 Mode d'élaboration

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



Conferma ordine nr. EI21018478
 Works/Our Order/Ref. nr.

Qualità: 316/316L
 Werkstoff/Grade/Matériau

Punzone del Collaudatore:
 Stempel des Werkzechners/Indigot
 Inspector's stamp/Cloupeur de l'inspecteur

MR

Avviso di Spedizione: D-VI22006065
 Lieferzustand/Packing list/VSL

Marcia: APML
 Maschinenbezeichnung
 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	Proveita/ Probestück Specimen/Eprouvette Lug. diam. Ø mm Diam. Ø mm Wahl. Diam. Thickness Lug. diam. ø inch Ø inch	Ø	Posto/ Staggio Position Lage	Snervamento Streckgrenze Yield Stress Limite élastique Rp 0,2% k.s.l.	Snervamento Streckgrenze Yield Stress Limite élastique	Resistenza Zugfestigkeit Tensile strength Résistance à traction Rm k.s.l.	Allungamento Bruchdehnung Elongation Allongement E 4d %	Strizione Zugdehnung Reduction of area Striction RA %	Resilienza Schlagarbeit Charpy Value Resilience	Durezza Festsch. Hardness Dureté HB	Valori richiesti	
											min	max
A	12,5	58	L	40	-	75 115	-	40 58	-	50 71	140 223	
						81					175	

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												
Conte. %/Al. Schmelze/Coada	min	max	1,25	10,50	2,00	10,00	0,020	0,020	0,020	0,100		
	0,003	1,00	2,00	16,00	3,00	1,00	14,00	0,040	0,030	0,100		
	C %	SI %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %	
287395	0,018	0,39	1,72	16,73	2,04	0,59	10,03	0,176	0,027	0,025	0,090	

Corrosion test in 18% 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 = 4,7 : 1
 Material annealed 1976°F for 8 h / 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 gestützt
 Antimixing testing performed with XRF/OES portable: OK
 Contrôle anti-mélange svr technique XRF/OES portable: OK

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

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



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Nach/According to/Selon

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Lieferzustand
Delivery state
Etat de livraison

Produttore:
Hersteller/fabrik/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 112009227 RELIANCE PROGRA
Bestell
Your order
Commande

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

Marchi di Fabbrica:
Zeichens des Lieferanten
Trade marks
Signes de l'usine productrice



Conferma ordine nr: EI21016478
Werkzettel/Order/Repar.

Qualità: 316/316L
Werkstoff/Grade/Nuance

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

MR

Avviso di Spedizione: D-VI22006065
Lieferanzeige/Packing list/E.L.

Marca: APML
Markenbezeichnung
Brand / Nuance

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.

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