



CERTIFICATO DI COLLAUDO - ABNAHMEPRUEFZEUGNIS - INSPECTION CERTIFICATE - CERTIFICAT DE RECEPTION

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

Certificato nr. **MEST780356 / 2021 /**
 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/Born/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr.: **107008845 RELIANCE PROGRA**
 Bestell
 Your order
 Commande

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

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



Conferma ordine nr.: **EI21008690**
 Werks/Our Order/Ret. nr.

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

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

MR

Avviso di Spedizione: **D-VI21018663**
 Lieferanzeige/Packing Instr.

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 2020 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 ASTM A473 2019 S31600/03 (6) ASTM A479 2020 S31600/03 A MIL-S-862 B/1 316/316L NACE MR0103 2015 S31600/03 A (7) NACE MR0175 2015 S31600/03 A (8) 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)Chemical analysis only. (7)ANSI/NACE MR0103/ISO 17945 November 23, 2015 (8)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 Description Objet de livraison	Tolleranza/Allowance/Tolerance		Lunghezza - In Length Longueur	Colata Cast Coulée	Pezzi Pieces Pièces	Peso - LB Weight Poids	Lotto nr. Lot nr. Lotier
		Dimensioni - In Dimensions Dimensions						
0070	Round	8,5000		217/ 217	286142		3.554	113815450

P.O.#: **P123959**
 R#: **R171253**
 ITEM#: **509378**
 HEAT#: **286142**
 BRANCH#: **875**

Provided by CPA
www.flowconditioner.com, info@cpacl.ca

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

Vicenza, 20/07/2021 VCCQ052 - MEST780356	Direzione Qualità Quality Management/Qualité Gestion R. BERTELLI	Direzione Prodotto Product Management/Produkt Management/Direction Produit P. MESSORI	Pagina 1 di 3
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1/19/2022



Acciaierie Valbruna S.p.A.

30100 VICENZA (Italia) - Viale della scienza, 25 z.
 Telefono 0444.888211 - Fax 0444.960836
 Stab.: 30100 BOLZANO (Italia) - Via A. Volta, 4/37
 Telefono 0471.924111 - Fax 0471.924407

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 Delivery state
 Etat de livraison

Produttore:
 Hersteller/Werks/Usina productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 107008845 RELIANCE PROGRA

Tipo di Elaborazione: E+AOD
 Erzeugungstyp
 Making process
 Mode d'elaboration

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



Bestell
 Your order
 Commande

Qualità: 316/316L
 Werkstoff/Grade/Reference

Punzone del Collaudatore:
 Stempel des Werkstoffverständigen
 Inspector's stamp/Plaque de l'essayeur

MR

Conferma ordine nr: EI21008690
 Works/Our Order/Ref. nr.

Marca: APML
 Markenbezeichnung
 Brand / Marque

Punzonatura: 316/316L
 Kennzeichnung
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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	Proveitalia / Probestat Reaktion/Reaction Exp. diam. Ø/mm Exp. de Diam. Ø/mm Wep. Diam. Thickness Exp. diam. epais mm	°F	Peak Soglia Produit Seuils Indication	Snervamento Erweichgrenze Yield Stress Limite elastique Rp 0,2%	Snervamento Erweichgrenze Yield Stress Limite elastique Limite d'elasticite	Resistenza Zugfestigkeit Tensile strength Resistance a la traction Rm	Allungamento Dehnung Elongation Allongement	Strizione Beugebruch Reduction of area Ectricite		Resilienza Kerbschlagenergie Impact Value Resilience	Durezza Härte Hardness Durete HB
								%	RA		
Valori richiesti		min		30	-	75	-	40	-	50	140
Anforderung/Required values Valeur de l'etat		max				115					223
A	12,5	68	L	40		81		58		70	173

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												
Galata / Ingot	min	max	1,25	10,50	2,00	10,00	0,020	0,010	0,030	0,100		
Schmelze/Cast	0,010	1,60	2,00	18,00	3,00	1,50	14,00	0,040	0,030	0,100		
	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %	
288142	0,018	0,31	1,78	16,71	2,04	0,55	10,09	0,153	0,029	0,029	0,084	

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 = 7,6 : 1
 Material annealed 1976°F for 5 h/water cooled.
 Material is DFARS Compliant

Sono state soddisfatte tutte le condizioni richieste Die gestellten Anforderungen sind in Anlage erfüllt The material has been furnished in accordance with the requirements Le matériel a été trouvé conforme aux exigences	Controllo antimiscelanza con tecnica XRF/OES portatile : OK Verwechslungsprüfung: durch XRF/OES Gerät gefolgt. Anti-mixing testing performed with XRF/OES portable : OK Contrôle antimélange svr 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 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, 20/07/2021 VCC052 - MEST780358	Direzione Qualità Qualitätsmanagement/Quality Management/Qualité R. BERTELLI	Direzione Prodotto Produktmanagement/Product Management/Dirección Producción P. MESSORI	Pagina 2 di 3



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Zeichn des Lieferanten
Trade marks
Sigles de l'usine productrice



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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.

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

Vicenza, 20/07/2021
VCC062 - MEST780356

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

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

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