



Acciaierie Valbruna S.p.A.

36100 VICENZA (Italia) - Viale della scienza, 25 z.l.
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. MEST890665 / 2022 /
Prüfung/Tost/Essai

Cliente / Basteller/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. 111009149 RELIANCE PROGRA
Bestell .
Your order
Commande

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

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



Conferma ordine nr: EI21015024
Werkst/Our Order/Ref. nr.

Qualità: 316/316L
Werkstoff/Grade/Nuance

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

MR

Avviso di Spedizione: D-VI22005120
Lieferanzeige/Packing list/V.B.L.

Marca: APM L
Markenbezeichnung
Brand / Nuance

Punzonatura: 316/316L
Kennzeichnung
Marking
Marquage

SPECIFICHE :

Note:

Anforderungen / Requirements / Exigences

Aufzeichnungen / Notes / Notes

VS1 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 2021 S31600/03 A (0)
ASME SA193 2021 B8M CLASS 1 (1)
ASME SA276 2021 S31600/03 A (2)
ASME SA320 2021 B8M CLASS 1 CLASS1 (3)
ASME SA479 2021 S31600/03 A (4)
ASTM A182 2021 S31600/03 A (5)
ASTM A193 2020 B8M CLASS 1
ASTM A262 PR. E 2015 316/316L (6)
ASTM A276 2017 S31600/03 A
ASTM A314 2019 S31600/03
ASTM A320 2018 B8M CLASS 1 CLASS1
ASTM A370 2021 .
ASTM A473 2021 S31600/03 (7)
ASTM A479 2021 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 2021 EDITION For products machined directly from bar refer to ASME SA479.
- (1)Section II Part A 2021 EDITION
- (2)Section II Part A 2021 EDITION
- (3)Section II Part A 2021 EDITION
- (4)Section II Part A 2021 EDITION
- (5)For products machined directly from bar refer also to ASTM A479.
- (6)Reapproved 2021
- (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

P.O.#: P124783
R#: R173726
ITEM#: 509378
HEAT#: 287687
BRANCH#: 875

Tolleranza: ASTM A484-20B TABLE 3

Pos. nr. Pos. nr. Item nr. N. de poste	Oggetto Gegenstand Product description Descrpt. du produit	Tolleranza/Allowance/Tolerance		Lunghezza - In Länge Length Longueur	Colata Schmelze Heat Coulée	Pezzi Stückzahl Pieces Pièces	Peso - LB Gewicht Weight Poids	Lotto nr. Losn. Lot nr. Lot n.
		Dimensioni - In Abmessungen Dimension Dimension						
0010	Round	8,5000		87/ 90	287687		2.908	129519590

34

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, 23/02/2022
VQC052 - MEST890665

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

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

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

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



Conferma ordine nr: EI21015024
 Werk/Our Order/Ref nr.

Qualità: 316/316L
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Punzone del Collaudatore:
 Stempel des Werksachverständigen
 Inspector's stamp/Poinçon de l'essayeur

MR

Avviso di Spedizione: D-VI22005120
 Lieferanzahl/Packing list/B.L.

Marca: APML
 Markenbezeichnung
 Brand / Nuance

Punzonatura: 316/316L
 Kennzeichnung
 Marking
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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 así como entregado										
TEST	Provetta/ Probe/Specimen/Éprouvette Larghezza Spess. / Breite / Diam. / Dicks / Width / Diam. / Thickness / Larg. / diam. / épais / mm	°F	Posiz. Saggio / Probenlage / Location / Eprouvettes / °	Snervamento / Streckgrenze / Yield Stress / Limite elastico / Rp 0,2% / k.s.l.	Snervamento / Streckgrenze / Yield Stress / Limite elastico	Resistenza / Zugfestigkeit / Tensile strength / Resistence a traction / Rm / k.s.l.	Allungamento / Bruchdehnung / Elongation / Allongement / E 4d / %	Strizione / Einschnürung / Reduction of area / Striction / RA / %	Resilienza / Kerbschlagarbeit / Impact Value / Resilience	Durezza / Härte / Hardness / Dureté / HB
	Valori richiesti / Anforderungen/Required values / Valeurs demandées	min		30	-	75	-	40	-	140
		max				115				223
A	12,5	68	L	39		83		61		174

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 / Heat / Schmelze/Coulée	min	max	1,25	16,50	2,00	10,00	0,020	-	-	-	-	-
	0,030	1,00	2,00	18,00	3,00	14,00	0,040	0,030	0,100	-	-	-
	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %	
287687	0,023	0,41	1,76	16,75	2,03	0,53	10,05	0,163	0,028	0,027	0,087	

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 = 7,0 : 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 il Anlage 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 Verunreinigungsprüfung durch XRF/OES Gerät geführt. 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
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Vicenza, 23/02/2022 VCCQ052 - MEST890665	Direzione Qualità Qualitätsmanagement/Quality Management/Gestion Qualité R.BERTELLI	Direzione Prodotto Produktmanagement/Product Management/Direction Produit P.MESSORI	Pagina 2 di 3



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Avviso di Spedizione: D-VI22005120
Lieferanzeige/Packing Instruction

Marca: APM L
Markenbezeichnung
Brand / Nuance

Punzonatura: 316/316L
Kontrollzeichnung
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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Vicenza, 23/02/2022
VCCQ052 - MEST890665

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