



Acciaierie Valbruna S.p.A.

36100 VICENZA (Italia) - Viale della scienza, 25 z.i.
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. MEST793643 / 2021 /

Nach/According to/Selon

Prüfung/Test/Essai

Cliente / Besteller/Purchase/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/firm/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 105008718 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
Sigles de l'usine productrice



Conferma ordine nr: EI21005868
Works/Our Order/Ref. nr.

Qualità: 316/316L
Werkstoff/Güte/Nuance

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

MR

Avviso di Spedizione: D-VI21020908
Lieferanzeige/Packing list/BL

Marca: APLM
Markenbezeichnung
Brand / Nuance

Punzonatura: 316/316L
Kanzelzeichnung
Marking
Marquage

SPECIFICHE :	Note:
Anforderungen / Requirements / Exigences	Anmerkungen / 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)	(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	
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)	(6)Chemical analysis only.
ASTM A479 2020 S31600/03 A	
ML-S-862 B/1 316/316L	
NACE MR0103 2015 S31600/03 A (7)	(7)ANSI/NACE MR0103/ISO 17945 November 23, 2015
NACE MR0175 2015 S31600/03 A (8)	(8)ANSI/NACE MR0175/ISO 15156-3, third edition November 23,2015
QQ-S-763 F 316/316L A	

Tolleranza: ASTM A484-20B TABLE 3							
Tolleranza/Allowance/Tolerance							
Pos. nr. Pos. nr. Item no. N. de poste	Oggetto Component Product description Descr. du produit	Dimensioni - In Abmessungen Dimensionen Dimension	Lunghezza - In Länge Length Longueur	Colata Schmelz Heat Coulée	Pezzi Stückzahl Pieces Pièces	Peso - LB Gewicht Weight Poids	Lotto nr. Lose Lot nr. Lote nr.
0020	Round	8,5000	207/ 208	286242		6.859	113110350

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER ACCORDING TO ISO 9001 : 2015, IATF 16949 : 2016, AS 9100D			
Vicenza, 01/09/2021 VCC052 - MEST793643	Direzione Qualità Quality Management/Quality Management/Direction Qualité R.BERTELLI	Direzione Prodotto Product Management/Product Management/Direction Produit P.MESSORI	Pagina 1 di 3

12/15/21
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Delivery state
Etat de livraison

Produttore:
Hers eller/Item/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 105008718 RELIANCE PROGRA
Bestell
Your order
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Tipo di Elaborazione: E+A0D
Erstschmelzungsart
Melting process
Mode d'elaboration

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



Conferma ordine nr: EI21005868
Werkst/Our Order/Ref nr:

Qualità: 316/316L
Werkstoff/Grade/Nuance

Punzone del Collaudatore:
Stempel des Werksachverständigen
Inspector's stamp/Ponçon de l'essayeur

MR

Avviso di Spedizione: D-VI21020908
Lieferanzeige/Packing list/B.L.

Marca: APLM
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 asi como entregado

TEST	Provetta/ Probe Specimen/Eprovette Larg. diam. Spess. Britt. Diam. Dicks. Wahl. Diam. Thickness Larg. diam. epess. mm	°F	Posiz. Soggio Position Lageort Umsetzung	Snervamento Streckgrenze Yield Stress Limite elastique Rp 0,2% k.s.l.	Snervamento Streckgrenze Yield Stress Limite elastique	Resistenza Zugfestigkeit Tensile strength Résistance à 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
A	12,5	68	L	38	-	82	62	74	-	167	

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

Colata / Host Schmelze/Coulee	min	max	1,25	16,50	2,00	10,00	0,020	0,030	0,100	0,020	0,030	0,100
	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %	
286242	0,018	0,35	1,79	16,77	2,03	0,58	10,09	0,171	0,029	0,020	0,092	

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 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.
Anmixing 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: sat factory
Contrôle visuel et dimensions: satisfaisant

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Vicenza, 01/09/2021 VCC052 - MEST793643	Direzione Qualità Quality Management/Qualitätsmanagement/Qualité R. BERTELLI	Direzione Prodotto Product Management/Produkt Management/Direction Produit P. MESSORI	Pagina 2 di 3
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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.

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Vicenza, 01/09/2021
VCQ052 - MEST793643

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

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

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