



Acciaierie Valbruna S.p.A.

36100 VICENZA (Italia) - Viale della scienza, 25 z.i.
Telefono 0444.988211 - Fax 0444.963836
Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4/37
Telefono 0471.924111 - Fax 0471.924457

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

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

Certificato nr. MEST695627 / 2021 /
Prüfung/Text/Essai

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

Stato di fornitura: Hot rolled - Annealed Peeled
Lieferzustand
Delivery state
Etat de livraison

Produttore:
Hersteller/Item/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 102008521 RELIANCE PROGRA
Bestell
Your order
Commande

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

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



Conferma ordine nr: EI21002169
Werkz./Our Order/Ref. nr.

Qualità: 316/316L
Werkstoff/Grade/Nuance

Punziona del Collaudatore:
Stempel des Werkstoffprüfingenieur
Inspector's stamp/Peignage de l'inspecteur

MR

Avviso di Spedizione: D-VI21005306
Lieferanweisung/Packing list/B.L.

Marca: MVAPML (MAXIVAL)
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-882 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

R243969
509364
LOAD# 51543

		Tolleranza: ASTM A484-20B TABLE 3							
Pos. nr.	Oggetto	Dimensioni - In	Lunghezza - In	Coilata	Pezzi	Peso - LB	Lotto nr.		
Pos. nr. Item no. Nr. de pièce	Description Product description Design. du produit	Abmessungen Dimension Dimension	Länge Length Longueur	Schneize Heat Coulée	Stückzahl Pieces Pièces	Gewicht Weight Poids	Lotusnr. Lot no. Lot no.		
0030	Round	5,0000	145/ 165	433635	2	1.768	130012120		

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER ACCORDING TO ISO 9001 : 2015, (ATF 16949 : 2016, AS 9100D			
Vicenza, 04/03/2021 VCO052 - MEST695627	Direzione Qualità Quality Management/Quality Management/Direction Qualité R.BERTELLI	Direzione Prodotto Product Management/Product Management/Direction Produit P.MESSORI	Pagina 1 di 3

ANS



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

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

Certificato nr. MEST695627 / 2021 /
 Prüfung/TestsEssai

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

Stato di fornitura: Hot rolled - Annealed Peeled
 Lieferzustand
 Delivery state
 Etat de livraison

Produttore:
 Hersteller/Werks/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordina nr: 102008521 RELIANCE PROGRA

Basist
 Your order
 Commande

Tipo di Elaborazione: E+AOD

Erweichungszust
 Melting process
 Mode d'elaboration

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



Confirma ordine nr: EI21002169

Werkst/Our Order/Ref. nr.

Qualità: 316/316L

Werkstoff/Grade/Nuance

Punzone del Collaudatore:
 Stempel des Werkstoffverständigen
 Inspector's stamp/Plombon de l'assesseur

MR

Avviso di Spedizione: D-VI21005306

Lieferanzettel/Packing list/B.L.

Marca: MVAPML (MAXIVAL)

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	Provetta/ Probe Sproben/Spröbweite Längung/Steil Brin's Diam. Geste Vign Diam. Thickness Larg. diam. épais mm	Ø F	Posiz. Saggio Profilage Liquant Emplacement	Snervamento Duceresenza Yield Stress Limite élastique Rp 0,2%	Snervamento Duceresenza Yield Stress Limite élastique	Resistenza Zugfestigkeit Tensile strength Résistance à traction Rm	Allungamento Bruchdehnung Elongation Allongement	Strizione Erweichung Reduction of area Sustion	Resilienza Kerbschlagarbeit Impact Value Resilience	Durezza Härte Hardness Dureté HB
Valori richiesti		min		30	-	75	-	40	-	140
Amordevor/Required values Valeurs demandées		max				115		50		223
A	12,5	68	L	40		84	66	77		172

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/Couée	min - max 0,030	1,00	1,25	16,50	2,00	10,00	0,020	0,020	0,030	0,100		
	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %	
433635	0,023	0,60	1,71	16,73	2,08	0,49	10,47	0,098	0,030	0,023	0,076	

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 = 19,3 : 1
 Material annealed 1940°F for 2.5h/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 fourni conforme aux exigences	Controllo antimisciolanza con tecnica XRF/OES portatile: OK Verwechslungsprüfung durch XRF/OES Gerät geführt. Antimixing testing performed with XRF/OES portable: OK Contrôle antimélange par technique XRF/OES portable: OK	Controllo visivo e dimensionale: soddisfa le esigenze Besichtigung und Ausmessung: ohne Beanstandung Visual inspection and dimensional check: satisfactory Contrôle visuel et dimensionnel: satisfaisant
---	---	---

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER ACCORDING TO ISO 9001 : 2015, IATF 16949 : 2016, AS 9100D			
Vicenza, 04/03/2021 VCQC52 - MEST695627	Direzione Qualità Quality Management/Qualität R. BERTELLI	Direzione Prodotto Product Management/Produktion P. MESSORI	Pagina 2 di 3



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

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

Certificato nr. MEST695627 / 2021 /
 Prüfung/Test/Essai

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

Stato di fornitura: Hot rolled - Annealed Peeled
 Lieferzustand
 Delivery state
 Etat de livraison

Produttore:
 Hersteller/Item/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 102008521 RELIANCE PROGRA
 Bestell
 Your order
 Commande

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

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



Conferma ordine nr: EI21002169
 Werkz/Our Order/Ref. nr.

Qualità: 316/316L
 Werkstoff/Grade/Nuance

Punzone del Collaudatore:
 Stempel des Werksachverständigen
 Inspector's Stamp/Pointon de l'essayeur

MR

Avviso di Spedizione: D-VI21005305
 Lieferanzeige/Packing list/B.L.

Marca: MVAPML (MAXIVAL)
 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.
 Maxival 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, 04/03/2021 VCO052 - MEST695627	Direzione Qualità Quality Management/Quality Management/Qualité Qualité R.BERTELLI	Direzione Prodotto Produktmanagement/Product Management/Direction Produit P.MESSORI	Pagina 3 di 3
--	---	--	------------------