



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. MEST834861 / 2021 /
 Prüfung/Test/Essai

Cliente / Basteller/Purchaser/Client
 VALBRUNA CANADA LTD
 8724 HOLLGATE 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: 110009087 Stock - Canada
 Bestell
 Your order
 Commande

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

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



Conferma ordine nr: EI21013696
 Werks/Our Order/Ref. nr.

Qualità: 316/316L
 Werkstoff/Grade/Nuance

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



Avviso di Spedizione: D-VI21027559
 Lieferanzeige/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 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 2020
 ASTM A473 2021 S31600/03 (7)
 ASTM A479 2020 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 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)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

Tolleranza: ASTM A484-20B TABLE 3

Toleranz/Allowance/Tolerance

Pos. nr. Pos. nr. Item no. Nr. da posto	Oggetto Objektstand Product description Objeto, de produsa	Dimensioni - In	Lunghezza - In	Colata	Pezzi	Peso - LB	Lotto nr.
		Abmessungen Dimension Dimension	Länge Length Longueur	Schmelze Heat Coulée	Stückzahl Pieces Piese	Gewicht Weight Poids	Losnr. Lot nr. Lot nr.
0010	Round	5,0000	157/ 158	435056	4	3.556	124310810

P.O.#: PI23925
 R#: R171255
 ITEM#: 509364
 HEAT#: 435056
 BRANCH#: 875

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

Vicenza, 10/11/2021 VCCQ52 - MEST834861	Direzione Qualità Qualitätsmanagement/Quality Management/Gestion Qualité R.BERTELLI	Direzione Prodotto Produktmanagement/Product Management/Direction Produit P.MESSORI	Pagina 1 di 3
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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/fabrik/Usine producteur

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 110009067 Stock - Canada
Bestell
Your order
Commande

Tipo di Elaborazione: E+AOD
Ertüchtigungsart
Milling process
Mode d'elaboration

Marchi di Fabbrica:
Zeichen des Lieferanten
Trade marks
Siglas de fábrica productiva



Confirma ordine nr: EI21013696
Wicks/Our Order/Ret. nr.

Qualità: 316/316L
Werkstoff/Grade/Vuance

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

MR

Avviso di Spedizione: D-VI21027559
Lieferanweisung/Packing list/VBL

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	Prova/Prüfung	°F	Soglia Limit	Snervamento Yield Stress Rp 0,2%	Snervamento Yield Stress Limite élastique	Resistenza Zugfestigkeit Tensile strength Rm	Allungamento Bieudehnung Elongation Allongement	Strizione Einschränkung Reduction of area Striction	Resilienza Kerbschlagenergie Impact Value Resilience	Durezza Härte Hardness Dureté HB
	Spezifikation Long diam. Spess. Brutto Diam. Dicke With Diam. Thickness Long. diam. épaisseur mm									
Valori richiesti Anforderungen/Required values Valeurs demandées		min		30	-	75	-	40	-	140
		max				115				223
A	12,5	68	L	38		82		63		165

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/Cast	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 %	
435056	0,011	0,52	1,66	16,92	2,04	0,59	10,30	0,107	0,029	0,026	0,072	

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 1976°F for 180'(total time)/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 matériau a été livré conforme aux exigences	Controllo antimiscelanza con tecnica XRF/OES portatile : OK Verwechslungsprüfung: durch XRF/OES Gerät geführt. Antiliming testing performed with XRF/OES portatile : OK Contrôle antimélange svr technique XRF/OES portable : OK	Controllo visivo e dimensionale: soddisfa le esigenze Beichtigug und Ausmessung: ohne Beanstandung Visual inspection and dimensional check 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, 10/11/2021 VCC052 - MEST834861	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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 Melting process
 Mode d'elaboration

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



Conferma ordine nr: EI21013696
 Works/Our Order/Re/ nr.

Qualità: 316/316L
 Werkstoff/Grade/Nuance

Punzione del Collaudatore:
 Stempel des Weisenschvorständigen
 Inspector's stamp/Pointon de l'essayeur

MR

Avviso di Spedizione: D-V/21027559
 Lieferanzahl/Packing list/S.L.

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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.
 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.

VCCQ052-MEST834861

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

Vicenza, 10/11/2021
 VCCQ052 - MEST834861

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

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

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