



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. MEST033882 / 2022 /

Nach/According to/Selon

Prüfung/Tests/Essai

Cliente / Besteller/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/Werk/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 111009149 RELIANCE PROGRA
 Bestell
 You' order
 Commande

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

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



Conferma ordine nr: EI21015024
 Werks/Our Order/Ret. nr.

Qualità: 316/316L
 Werkstoff/Grade/Nuance

Punzone del Collaudatore:
 Stempel des Werkstoffsachverständigen
 Inspector's stamp/Pointon de l'essayeur

MR

Avviso di Spedizione: D-VI22012086
 Lieferanzeige/Packing list/VBL

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 2021 S31600/03 A (0)	(0)Section II Part A 2021 EDITION For products machined directly from bar refer to ASME SA479.
ASME SA193 2021 B8M CLASS 1 (1)	(1)Section II Part A 2021 EDITION
ASME SA276 2021 S31600/03 A (2)	(2)Section II Part A 2021 EDITION
ASME SA320 2021 B8M CLASS 1 CLASS1 (3)	(3)Section II Part A 2021 EDITION
ASME SA479 2021 S31600/03 A (4)	(4)Section II Part A 2021 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 A282 PR. E 2015 316/316L (6)	(6)Reapproved 2021
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)	(7)Chemical analysis only.
ASTM A479 2021 S31600/03 A	
MIL-S-862 B/1 316/316L	
NACE MR0103 2015 S31600/03 A (8)	(8)ANSI/NACE MR0103/ISO 17943 November 23, 2015
NACE MR0175 2015 S31600/03 A (9)	(9)ANSI/NACE MR0175/ISO 15153-3, third edition November 23,2015
QQ-S-763 F 316/316L A	

Tolleranza: ASTM A484-21 TABLE 3

Pos. nr. Pos. nr. Item nr. No. de poste	Oggetto Component Product description Descr. 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. Losen. Lot no. Lot no.
		Dimensioni - In Abmessungen Dimension Dimension						
0050	Round	5,0000		150/ 161	288307	4	3.455	132819040

P.O.#: P125868
 R#: R177963
 ITEM#: 509364
 HEAT#: 288307
 BRANCH#: 875

1/20.

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

Vicenza, 02/05/2022 VCQ052 - MEST033882	Direzione Qualità Qualitätsmanagement/Cuality Management/Qualität Quality R. BERTELLI	Direzione Prodotto Produktmanagement/Product Management/Direction Produit P. MESSORI	Pagina 1 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. **MEST033882 / 2022 /**
 Prüfung/TEST/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: **111009149 RELIANCE PROGRA**
 Bestell
 Your order
 Commando

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

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



Conferma ordine nr: **EI21015024**

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

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

MR

Avviso di Spedizione: **D-VI22012086**
 Lieferanzeige/Peeking Invoice

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 asi como entregado

TEST	Provetta / Probe Spezies/Échantillon Leg. Dim. Spett. Werk Dim. Dicks Leg. diam. Spess mm	°F	Posiz. Säggle Position Lieu Positiones °	Sneramento	Sneramento	Resistenza	Allungamento	Strizione	Resilienza	Durezza	
				Snecgrazze Yield Stress Limite elastique Rp 0,2%	Snecgrazze Yield Stress Limite elastique	Qualitativ Tensile strength Resistance a traction Rm N x 1	Bruchstang Elongation Allongement E 4d %				RA %
Valori richiesti		min		30	-	75	-	40	-	50	140
Anforderungen/Requisito values Valeurs requises		max				115					223
A	12,5	68	L	38		83	58	75			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 / Heat	min	max	1,25	16,50	2,00	10,00	0,010	0,010	0,010	0,010	0,100	-	-	-	-
Schmelze/Coûlee	0,030	1,00	2,00	18,00	3,00	1,00	14,00	0,040	0,030	0,100	-	-	-	-	-
	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %				
288307	0,017	0,54	1,73	16,87	2,03	0,53	10,09	0,129	0,029	0,027	0,077				

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 in Anlage erfüllt
 The material has been furnished in accordance with the requirements
 Le materiel a été trouve conforme aux exigences

Controllo antimescolanza con tecnica XRF/OES portatile : OK
 Verwachsungsprüfung: durch XRF/OES Gerät geföhrt.
 Antimixing 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 dimens anal checks 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, 02/05/2022 VCC052 - MEST033882	Direzione Qualità Qualitätsmanagement/Quality Management/Gestion Qualité R. BERTELLI	Direzione Prodotto Produktmanagement/Product Management/Direction Produit 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. MEST033882 / 2022 /
 Prüfung/Tes/Éssai

Cliente / Besteller/Purchaser/Client

VALBRUNA CANADA LTD
 6724 HOLGATE 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: 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 fusite productrice



Conferma ordine nr: EI21015024

Werks/Our Order/Ref. nr.

Qualità: 316/316L

Werkstoff/Grade/Nuance

Punzone del Collaudatore:

Stempel des Werksachverständigen
 Inspector's stamp/Plombon de l'assesseur

MR

Avviso di Spedizione: D-VI22012086

Lieferanzege/Packing list/B.L.

Marca:

Markenbezeichnung
 Brand / Nuance

MVAPML (MAXIVAL)

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, 02/05/2022

VCO052 - MEST033882

Direzione Qualità
 Qualitätsmanagement/Quality Management/Gestion Qualité

R.BERTELLI

Direzione Prodotto
 Produktmanagement/Product Management - U/Direction Produit

P.MESSORI

Pagina

3 di 3