



Acciaierie Valbruna S.p.A.

36100 VICENZA (Italia) - Viale della scienza, 25 z.l.
 Telefono 0444.968211 - Fax 0444.968336
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CERTIFICATO DI COLLAUDO - ABNAHMEPRUEFZEUGNIS - INSPECTION CERTIFICATE - CERTIFICAT DE RECEPTION

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

Certificato nr. MEST319242 / 2018 /
 Prüfung/Test/Essai

Ciente / Besteller/Purchaser/Cliant
VALBRUNA CANADA LTD
 8724 HOLLGATE 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. 809007124 STOCK
 Bestell
 Your order
 Commande

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

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



Conferma ordine nr. EI18008717
 Werk/Our Order/Ref. Nr.

Qualität: 316/316L
 Werkstoff/Grade/Nuance

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

MR

Avviso di Spedizione: D-VI18027870
 Lieferanzeige/Frachtung IS/VELL

Marca: APML
 Markenbezeichnung
 Brand/Name

Punzonatura: 316/316L
 Kennzeichnung
 Marking
 Marquage

SPECIFICHE :	Note:
Anforderungen / Requirements / Exigences	Auflzeichnungen / Notes / Notes
VSI 0 316/316L A	
AISI 316/316L	
AMS 5648 M S31600 A	
AMS 5653 H S31603 A	
AMS-QQ-S-763 D 316/316L A	
ASME SA182 2017 S31600/03 A (0)	(0)Section II Part A 2017 EDITION For products machined directly from bar refer to ASME SA478.
ASME SA193 2017 B8M CLASS 1 (1)	(1)Section II Part A 2017 EDITION
ASME SA276 2017 S31600/03 A (2)	(2)Section II Part A 2017 EDITION
ASME SA320 2017 B8M CLASS1 (3)	(3)Section II Part A 2017 EDITION
ASME SA479 2017 S31600/03 A (4)	(4)Section II Part A 2017 EDITION
ASTM A182 2018 S31600/03 A (5)	(5)For products machined directly from bar refer also to ASTM A478.
ASTM A193 2017 B8M CLASS 1	
ASTM A262 2015 PRACTICE E	
ASTM A276 2017 S31600/03 A	
ASTM A314 2015 S31600/03	
ASTM A320 2017A B8M CLASS1	
ASTM A370 2017	
ASTM A473 2001 S31600/03 (6)	(6)Chemical analysis only.
ASTM A479 2018 S31600/03 A	
MIL-S-862 B/1 316/316L	
NACE MR0103 2015 S31600/03 A (7)	(7)ANSI/NACE MR0103MSO 17945 November 23, 2015
NACE MR0175 2015 S31600/03 A (8)	(8)ANSI/NACE MR0175ISO 15156-3, 3rd edition November 23, 2015
QQ-S-763 F 316/316L A	

Tolleranza: ASTM A484-18 TABLE 3

Pos. nr. Part. nr. No. de piece	Oggetto Description Description du produit	Tolleranza/Allowance/Tolerance		Lunghezza - in Length Longueur	Colata Casting Matiere	Pezzi Quantity Pieces	Peso - LB Weight Poids	Lotto nr. Lot Lot n°
		Dimensioni - in Dimensions Dimension						
0060	Round	16,0000		161/ 161	278063		9,387	821501840

P.O.#: P119172
 R#: R153427
 ITEM#: 523266
 HEAT#: 278063
 BRANCH#: 875

INS

Provided by: ENCORE METALS DIVISION OF RMCL



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36100 VICENZA (Italia) - Viale della scienza, 25 z.l.
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In conformità a: EN 10204 (2004), 3.1 / ISO 10474 (2013), 3.1 Certificato nr. MEST319242 / 2018 / Prüfung/Test/Essai

Cliente / Besteller/Purchaser/Client: VALBRUNA CANADA LTD
 8724 HOLGATE CRESCENT
 L5T 5Z1 - MILTON, ONT L5T 5Z1 - CA
 Stato di fornitura: Forged - Annealed Peeled
 Lieferzustand: Delivered state
 Etat de livraison:

Ordine nr. 809007124 STOCK
 Bestell / Your order / Commande
 Tipo di Elaborazione: E+ADD
 Bearbeitungsart / Working process / Mode de fabrication:

Conferma ordine nr. EI18008717
 Vertrags / Order Ref. nr.:
 Qualità: 316/316L
 Werkstoff/Grade/Reference:

Avviso di Spedizione: D-VI18027870
 Lieferanfrage/Packing list/BL:
 Marca: APML
 Markenbezeichnung / Brand / Nuance:

Produttore: ACCIAIERIE VALBRUNA S.P.A.
 Hersteller/Werk/Usine productora:
 Marchi di Fabbrica: AV
 Zeichen des Lieferanten / Trade marks / Signes de l'usine productrice:
 Punzone del Collaudatore: MR
 Stempel des Werkstoffverständigen / Inspector's stamp/Plaque de l'inspecteur:
 Punzonatura: 316/316L
 Kennzeichnung / Marking / Marquage:

TEST ALLO STATO DI FORNITURA										
Test on delivery condition / Prüfung auf lieferbarem Produkt / Test à l'état de fourniture / Prueba sobre el material así como entregado										
TEST	Provetta/ Probe/Éprouvette Specimen/Éprouvette Lang. diam. Spess. Brda. Diam. Dicke Wahl. Diam. Thickness Lang. diam. épaisseur	°F	Post. Saggio Prüfung L'essai	Sneramento Élongation Yield Stress Limite élastique Rp 0,2% k.t.l.	Sneramento Élongation Yield Stress Limite élastique	Resistenza Zugfestigkeit Tensile strength Résistance à traction Rm k.t.l.	Allungamento Bruchdehnung Elongation Allongement E 4d %	Sirizione Échirement Reduction of area Écrasement RA %	Resilienza Kerbschlagenergie Impact Value Resilience	Durezza Härte Hardness Dureté HB
Valori richiesti Anforderungen/Requisits Valeurs demandées		min max		30	-	75 115	- 40	- 50	-	140 223
A	12,5	68 L	39		79	63	74		168	

TEST ALLO STATO DI FORNITURA		
Test on delivery condition / Prüfung auf lieferbarem Produkt / Test à l'état de fourniture / Prueba sobre el material así como entregado		
TEST	min	max
A Grain size for ASTM E112		1

Mechanical properties according to ASTM A370.

Analisi chimica												
Chemische Zusammensetzung/Chemical Analysis/Analyse chimique												
Colata / Abz. / Schmelze/Coûlée	min - max	0,030	1,00	1,25 2,00	16,50 18,00	2,00 3,00	10,00 14,00	1,00	0,040	0,020 0,030	0,100	-
	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %	-
278063	0,017	0,35	1,77	16,75	2,01	0,39	10,06	0,134	0,034	0,023	0,095	-

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.
 Annealing temperature : 1940° F for 8 h/water.
 Micro and macro etch test : OK
 Reduction ratio = 4,3 : 1
 Material is DFARS Compliant

Sono stata soddisfatta tutte le condizioni richieste
 Die gestellten Anforderungen sind z. Aslage erfüllt
 The material has been kuhished in accordance with the requirements
 Le matériel a été livré conforme aux exigences
 Controllo antimisciolanza: OK
 Verwehrtprüfung: spezialanalytisch durchgeführt
 Anticaking testing performed: OK
 Contrôle anticollage I&K: I.A.S.
 Controllo visivo a dimensionale: soddisfatta le esigenze
 Besichtigung und Abmessung: ohne Beanstandung
 Visual inspection and dimensional check: satisfactory
 Contrôle visuel et dimension: satisfaisant

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

Certificato nr. **MEST319242 / 2018 /**
 Protimp/Text/Esasl

Cliente / Besteller/Purchaser/CClient
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/Werks/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: **809007124 STOCK**
 Bestell
 Your order
 Commande

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

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



Conferma ordine nr: **EI18008717**
 Verkaufsur Order/Ref. nr.

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

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

MR

Avviso di Spedizione: **D-VI18027870**
 Lieferanweisung Packing Instruct.

Marca: **APML**
 Markenbezeichnung
 Brand / Nuance

Punzonatura: **316/316L**
 Kennzeichnung
 Marking
 Marquage

Melted 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 through Portal System when it leaves the production plant.

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

The Quality Management System is Certified acc. Pressure Equipment Directive [97/23/EC] Annex 1, s. 4.3 and 2014/68/EU by TÜEV and LLOYD'S
 Any act of tampering, modification, alteration, counterfeiting and/or falsification and/or any other action which modifies the contents of this last 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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