

C193765



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. MEST115628 / 2017 /

Nach/According to/Selon

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 FORGED**
 Lieferzustand
 Delivery state
 Etat de livraison

Produttore:
 Hersteller/Item/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr. 705006370 Stock - Canada
 Bestell
 Your order
 Commande

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

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



Conferma ordine nr: **EI17005543**
 Werks/Our Order/Ref. nr.

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

Punzone del Collaudatore:
 Stempel des Werksachverständigen
 Inspector's stamp/Poinçon de l'assesseur

MR

Avviso di Spedizione: **D-VI17023377**
 Lieferanzeige/Packing list/B.L.

Marca: **APML**
 Markenbezeichnung
 Brand / Nuance

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

SPECIFICHE :	Note:
Anforderungen / Requirements / Exigences	Aufzeichnungen / Notes / Notes
VSI D 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 2015 S31600/03 A (0)	(0)SECTION II PT.A 2015 EDITION For products machined directly from bar refer to ASME SA479.
ASME SA193 2015 B8M CLASS1 (1)	(1)SECTION II PT.A 2015 EDITION
ASME SA276 2015 S31600/03 A (2)	(2)SECTION II PT.A 2015 EDITION
ASME SA320 2015 B8M CLASS1 (3)	(3)SECTION II PT.A 2015 EDITION
ASME SA479 2015 S31600/03 A (4)	(4)SECTION II PT.A 2015 EDITION
ASTM A182 2016 S31600/03 A (5)	(5)For products machined directly from bar refer also to ASTM A479.
ASTM A193 2016 B8M CLASS1	
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 2017 S31600/03 A	
MIL-S-862 B/1 316/316L	
NACE MR0103 2010 S31600/03 A	
NACE MR0175 2015 S31600/03 A (7)	(7)ANSI/NACE MR0175/ISO 15156-3, third edition November 23,2015
QQ-S-763 F 316/316L A	

Tolleranza: ASTM A484-16 TABLE 3

Pos. nr. Pos. nr. Item nr. Nr. de poste	Oggetto Gegenstand Product description Design. 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. Losnr. Lot nr. Lot nr.
		Dimensioni - In Abmessungen Dimension Dimension						
0040	Round	8,5000		233/ 233	273944		3.911	711613350

Vicenza, 28/08/17

VCQ008 - MEST115628

Il collaudatore di stabilimento / der Werksachverständige / Works inspector / L'agent d'usine

M.RIZZOTTO

Pagina - 1 di 3



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

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



Confirma ordine nr: EI17005543
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Qualità: 316/316L
 Werkstoff/Grade/Nuance

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 Stempel des Werksachverständigen
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MR

Avviso di Spedizione: D-VI17023377
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Marca: APLM
 Markenbezeichnung
 Brand / Nuance

Punzonatura: 316/316L
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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	Provette/ Probes Spezimen/Éprouvettes Larg. diam. Spéc. Braid Diam. Dicke Width Diam. Thickness Larg. diam. épais mm	Ø F	Pozic. Sagitt. Penrose Location Einsenkung n	Snervamento	Snervamento	Resistenza	Allungamento	Strizione	Resilienza	Durezza		
				Streckgrenze Yield Stress Limite elastique Rp 0,2% k.s.L.	Streckgrenze Yield Stress Limite élastique	Zugfestigkeit Tensile strength Resistance à traction Rm k.s.L.	Bruchdehnung Elongation Allongement E 4d %	Erweichung Reduction of area Striction RA %	Kerbschlagarbeit Impact Value Resilience		Hardness Dureté Dureté HB	
Valori richiesti		min		30	-	75	-	40	-	50	-	140
Andänderungen/Required values Valeurs demandées		max				115						223
A	12,5	68	L	39		84	64		75			165

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		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	0,020	-	-	-	-	-
Schmelze/Couée	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 %	
273944	0,015	0,41	1,69	16,78	2,03	0,52	10,00	0,107	0,029	0,023	0,085	

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

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Pagina - 2 di 3

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Melting process
Mode d'elaboration

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Zeichen des Lieferwerkes
Trade marks
Signes de fusine productrice



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Brand / Nuance

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Produced without class I-II Ozone depleting substances.
Solution heat treated free from continuous carbide network.
Annealing temperature : 1940° F for 4 h/water.
Micro and macro etch test : OK
Reduction ratio = 7,6 : 1
Material is DFARS Compliant

Sono state soddisfatte tutte le condizioni richieste
Die gestellten Anforderungen sind lt. Anlage erfüllt
The material has been furnished in accordance with the requirements
Le materiel à été trouvé conforme aux exigences

Controllo antimiscelanza: OK
Verwachsungsprüfung: spektralanalytisch durchgeführt
Antimixing testing performed: OK
Contrôle antimélange fait: r.a.s.

Controllo visivo e dimensionale: soddisfa le esigenze
Besichtigung und Ausmessung: ohne Beanstandung
Visual inspection and dimensional checks: satisfactory
Contrôle visuel et dimensions: satisfaisant

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 : 2008, ISO/TS16949 : 2009, AS 9100C

The Quality Management System is Certified acc. Pressure Equipment Directive [97/23/EC] Annex 1,s.,4,3 and 2014/68/EU by TUEV 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.