



C179301

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

In conformità a: **EN 10204 (2004)**, 3.1

Certificato nr. MEST025903 / 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**

Produttore:
 Hersteller/Item/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 702006213 40379 ASA ALLOY
 Bestell
 Your order
 Commande

Tipo di Elaborazione: E+AOD

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



Conferma ordine nr: EI17002007
 Werks/Our Order/Ref nr.

Qualità: 316/316L

Punzone del Collaudatore:
 Stempel des Werkssachverständigen
 Inspector's stamp/Plouçon de l'assesseur

MR

Avviso di Spedizione: D-VI17005176
 Lieferanzelge/Packing list/B.L.

Marca: APLM

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 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 2016 S31600/03 A	
ASTM A314 2015 S31600/03	
ASTM A320 2015A B8M CLASS1	
ASTM A370 2015 .	
ASTM A473 2001 S31600/03 (6)	(6)Chemical analysis only.
ASTM A479 2016 S31600/03 A	
MIL-S-862 B/1 316/316L	
NACE MR0103 2010 S31600/03 A	
NACE MR0175 2009 S31600/03 A (7)	(7)ANSI/NACE MR0175/ISO 15158-3, second edition 2009-10-15 Technical circular 1:2011 Published 2011-06-14
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 Description 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						
0020	Round	13,0000		149/ 149	272522		5.747	628105340

Vicenza, 20/02/17

VCQD08 - MEST025903

(Mod. MCE2) VGP25M3258 16785A1F4911001EFC3

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

M.RIZZOTTO *[Signature]*

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Acciaierie Valbruna S.p.A.

36100 VICENZA (Italia) - Viale della scienza, 2, z.l.
Telefono 0444.968211 - Fax 0444.968336
Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4/37
Telefono 0471.924111 - Fax 0471.924497

C178301

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Delivery state: Forged - Annealed FORGED
Etat de livraison: Forged - Annealed FORGED

Produttore:
Hersteller/Werks/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 702006213 40379 ASA ALLOY
Bestell: Your order
Commande

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

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



Conferma ordine nr: EI17002007

Qualità: 316/316L
Werkstoff/Grade/Numéro: 316/316L

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

MR

Avviso di Spedizione: D-VI17005176
Lieferanzeige/Packing list/V.L.

Marca: APML
Markenbezeichnung: APML
Brand / Nuance: APML

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

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	°F	Post. Saggio	Sneramento	Sneramento	Resistenza	Allungamento	Strizione	Resilienza	Durezza	
	Spezialanfertigung Larg. diam. Spec. Brutto Diam. Dicht. Weld diam. Thickness Larg. diam. épaisseur mm		Profilage Location Emplacement 1	Spezgespanne Yield Stress Limite élastique Rp 0,2% k.s.l.	Spezgespanne Yield Stress Limite élastique k.s.l.	Zugfestigkeit Tensile strength Résistance à traction Rm k.s.l.	Bruchdehnung Elongation Allongement E 4d %	Reduktion der Querschnittsfläche RA %	Kerbschlagarbeit Impact Value Resilience		
Valori richiesti		min		30	-	75	-	40	-	50	140
Anforderungen/Required values		max				115					223
A	12,5	68	L	38		81		62		74	167

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	min	-	1,25	16,50	2,00	-	10,00	-	-	0,020	-	-
Schmelze/Coûle	max	0,030	1,00	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 %	
272522	0,014	0,34	1,74	16,68	2,04	0,45	10,04	0,148	0,029	0,027	0,084	

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 = 4,7 : 1
Annealing temperature: 1940°F for 6 h/water.
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 matériel a été trouvé conforme aux exigences

Controllo antimescolanza: OK
Verwechslungsprüfung: spektralanalytisch durchgeführt
Anmischungstestung performed: OK
Contrôle antimeslange 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



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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.
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.

Vicenza, 20/02/17

VCQ008 - MEST025903

(Mod. MCE2) VBP221453398 02/2004 0487102/02/2003

Il collaudatore di stabilimento / der Werkssachverständige / Works Inspector / L'agent d'usine

M. RIZZOTTI *[Signature]*

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