

C166630



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
Nach/According to/Selon

Certificato nr. MEST876662 / 2016 /
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: 604005710 Stock - Canada

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

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



Bestell
 Your order
 Commande

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

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

MR

Conferma ordine nr: E116003312
Works/Our Order/Ref nr.

Marca: **APML**
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 L S31600 A
 AMS 5653 H S31603 A
 AMS-QQ-S-763 D 316/316L A
 ASME SA182 2015 S31600/03 A (0)
 ASME SA193 2015 B8M CLASS1 (1)
 ASME SA276 2015 S31600/03 A (2)
 ASME SA320 2015 B8M CLASS1 (3)
 ASME SA479 2015 S31600/03 A (4)
 ASTM A182 2015 S31600/03 A (5)
 ASTM A193 2016 B8M CLASS1
 ASTM A262 2015 PRACTICE E
 ASTM A276 2016 S31600/03 A
 ASTM A314 2008 S31600/03
 ASTM A320 2015A B8M CLASS1
 ASTM A370 2015
 ASTM A473 2001 S31600/03 (6)
 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)
 QQ-S-763 F 316/316L A

(0)SECTION II P.T.A 2015 EDITION For products machined directly from bar refer to ASME SA479.

(1)SECTION II P.T.A 2015 EDITION

(2)SECTION II P.T.A 2015 EDITION

(3)SECTION II P.T.A 2015 EDITION

(4)SECTION II P.T.A 2015 EDITION

(5)For products machined directly from bar refer also to ASTM A479.

(6)Chemical analysis only.

(7)ANSI/NACE MR0175/ISO 15156-3, second edition 2009-10-15 Technical circular 1:2011 Published 2011-06-14

Tolleranza: ASTM A484-15 TABLE 3

Tolleranza/Allowance/Tolerance

Pos. nr. <small>Pos. nr. Item nr. Nr. de poste</small>	Oggetto <small>Gegenstand Product description Descript. du produit</small>	Tolleranza/Allowance/Tolerance		Lunghezza - In <small>Length Longueur</small>	Colata <small>Schmelze Heat Coulée</small>	Pezzi <small>Sokzali Pieces Pièces</small>	Peso - LB <small>Gewicht Weight Poids</small>	Lotto nr. <small>Losnr. Lot nr. Lot nr.</small>
		Dimensioni - In <small>Abmessungen Dimension Dimension</small>						
0100	Round	11,0000		147/ 149	270123		8.179	606007350

Vicenza, 27/05/16

VCC008

(Mod. MCE2)

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

M. Rizzotto

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 Delivery state
 Etat de livraison

Produttore:
 Hersteller/Fabrikant/Usine production
ACCIAIERIE VALBRUNA S.P.A.

Ordine nr. **604005710 Stock - Canada**
 Bestell
 Your order
 Commande

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

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



Conferma ordine nr: **EI16003312**
 Werks/Our Order/Ref. nr.

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

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

MR

Avviso di Spedizione: **D-VI16013443**
 Lieferanweisung/Packing list/B.L.

Marca: **APML**
 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'état de fourniture / Prueba sobre el material así como entregado											
TEST	Provetta/ Probe Specimen/Éprouvette Larg. diam. Spz. / Bore Diam. Thickn. Width Diam. Thickn. Larg. diam. épais mm	°F	1) Longitudinale/Long. / Transversale/Quer. / Or Tangenziale/Tangential		Snervamento Yield Stress Yield Stress Limite élastique Rp 0,2% k.s.l.	Snervamento Yield Stress Yield Stress Limite élastique	Resistenza Zugfestigkeit Tensile strength Resistance à traction Rm k.s.l.	Allungamento Dehnung Elongation Allongement E 4d %	Strizione Einkerbung Reduction of area Striction RA %	Resilienza Kerbschlagarbeit Impact Value Resilience	Durezza Härte Hardness Dureté HB
			min	max							
Valori richiesti Anforderungen/Required values Valeurs requises					30	-	75 115	-	40	-	140 223
A	12,5	68	L		36		80		62		165

TEST ALLO STATO DI FORNITURA			
Test on delivery condition / Prüfung auf lieferbarem Produkt / Test a 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 Schmelze/Castile	min - max	0,030	1,00	1,25 2,00	16,50 18,00	2,00 3,00	1,00	10,00 14,00	-	0,040	0,020 0,030	0,100	-	-
	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %			
270123	0,020	0,44	1,32	16,87	2,02	0,53	10,04	0,120	0,030	0,030	0,078			

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 5 h/water.
 Micro and macro etch test: OK
 Reduction ratio = 4,2 : 1
 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 matériel a été trouvé conforme aux exigences

Controllo antimiscelazione: OK
 Verwechslungsprüfung: spektralanalytisch durchgeführt
 Anfröhmungstest performed: OK
 Contrôle entremalage fait: r.a.s.

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

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Erzschmelzungsart
Melting process
Mode d'elaboration

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

Conferma ordine nr: EI16003312
Werk/Our Order/Ref. nr.

Qualità: 316/316L
Werkstoff/Grade/Nuance

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

Avviso di Spedizione: D-VI16013443
Lieferanzeige/Packing list/B.L.

Marca: APLM
Markenbezeichnung
Brand / Nuance

Punzonatura: 316/316L
Kennzeichnung
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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 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.