



Acciaierie Valbruna S.p.A.

38100 VICENZA (Italia) - Viale della scienza, 25 z.l.
 Telefono 0444.988211 - Fax 0444.983836
 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. MEST249606 / 2018 /

Nach/According to/à la

Prüfung/Test/Éessai

Cliente / Besteller/Purchaser/Client
VALBRUNA CANADA LTD
 8724 HOLGATE CRESCENT
 LET 5Z1 - MILTON, ONT L5T 5Z1 - CA

Stato di fornitura: Forged - Annealed FORGED
 Lieferzustand
 Delivery state
 État de livraison

Produttore:
 Hersteller/Werksachverständiger

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 802006870 Replacement sto
 Bestell
 Your order
 Commande

Tipo di Elaborazione: E+AOD
 Erweichungsart
 Melting process
 Mode d'élaboration

Marchi di Fabbrica:
 Zeichen des Lieferanten
 Trade marks
 Signes de fusine produciants



Conferma ordine nr: EI18002298
 Works/Our Order/Al n°.

Qualità: 316/316L
 Werkstoff/Grado/Nuance

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

MR

Avviso di Spedizione: D-VI18014535
 Lieferanzahl/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 à l'état de fourniture / Prueba sobre el material así como entregado

TEST	Provolta / Probezeit Specification/Erweichzeit Leg. diam. Spez. Bore Diam. Dims Weld Diam. Thickness Leg. diam. units mm	°F	Festl. Saggio Festigkeit Tensile Erweichung N	Snervamento Stressgrenze Yield Stress Limite élastique Rp 0,2% k.s.t.	Snervamento Stressgrenze Yield Stress Limite élastique	Resistenza Zugfestigkeit Tensile strength Résistance à traction Rm k.s.t.	Allungamento Bruchdehnung Elongation Allongement		Strizione Einschnürung Reduction of area Strain RA %	Resilienza Kerbschlagenergie Impact Value Resilience	Durezza Härte HRC/HRA Dureté HB
	Valori richiesti Anforderungen/Required values Values/demandes						min	max			
A	12,5	68	L	30	-	75 115	-	40	-	50	140 223
A				39		63		58		73	65

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

Designation	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %	min		max	
												0,030	1,00	1,25	16,00
277051	0,012	0,27	1,75	16,87	2,08	0,48	0,02	0,124	0,032	0,023	0,076				

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 = 7,6 : 1
 Annealing temperature : 1940° F for 4 h/water.
 Material is DFARS Compliant

Sono state soddisfatte tutte le condizioni richieste
 Die gestellten Anforderungen sind erfüllt.
 The material has been furnished in accordance with the requirements
 Le matériel a été livré conforme aux exigences

Controllo antimiscelazione: OK
 Verwechslungsprüfung: spektralanalytisch durchgeführt
 Antirisking testing performed: OK
 Contrôle antimélange fait: k.s.t.

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

Vicenza, 18/05/18

VCC008 - MEST249606

(Mod. MCE2) 101/102/103/104/105/106/107/108/109

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

M. RIZZOTTI

Pagina - 2 di 3



Acciaierie Valbruna S.p.A.

36100 VICENZA (Italia) - Viale della scienza, 25 z.i.
 Telefono 0444.968211 - Fax 0444.968336
 Stab.: 38105 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. MEST249606 / 2018 /

Nach/According to/Selon

Prüfung/Test/Essai

Cliente / Besteller/Purchaser/Client VALBRUNA CANADA LTD 8724 HOLLGATE CRESCENT L5T 5Z1 - MILTON, ONT L5T 5Z1 - CA	Stato di fornitura: Forged - Annealed FORGED Lieferzustand Delivery state Etat de livraison	Produttore: Hersteller/Werk/Usine producer
Ordine nr: 802006870 Replacement sto Bestell Your order Commande	Tipo di Elaborazione E+AOD Erhmelzungsart Melting process Mode d'elaboration	Marchi di Fabbrica: Zeichen des Lieferwerkes Trade marks Signes de l'usine productrice
Conferma ordine nr: EI18002298 Works/Our Order/Ref. nr.	Qualità: 316/316L Werkstoff/Grade/Nuance	Punzone del Collaudatore: MR Stempel des Werksachverständigen Inspector's stamp/Poinçon de l'essayeur
Avviso di Spedizione: D-VI18014535 Lieferanzeige/Packing list/V.B.L.	Marca: APML Markenbezeichnung Brand / Nuance	Punzonatura: 316/316L Kennzeichnung Marking Marque

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 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.

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.

Provided by: ENCORE METALS DIVISION OF RMCL

Vicenza, 18/05/18

VCC008 - MEST249606

(Mod. MCE2) WSP/EN 10204-3.1/ISO 10474-3.1/EN 10204-3.1

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

M. RIZZOTTO

Pagina - 3 di 3