



Acciaierie Valbruna S.p.A.

36100 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

Pins mixeu

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

In conformità a: EN 10204 (2004), 3.1 / ISO 10474 (2013), 3.1
Nech/According to/Sein

Certificato nr. MEST413058 / 2019 /
Prüfung/Test/Essai

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

Stato di fornitura: Hot rolled - Annealed Cold Drawn
Lieferzustand
Delivery state
Etat de livraison

Produttore:
Hersteller/Hersteller/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 902007358 Stock - Canada
Bestell
Your order
Commande

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

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



Conferma ordine nr: E119001581
Werk/Dur Order/Ref. nr.

Qualità: 316/316L
Werkstoff/Grade/Nuance

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

MR

Avviso di Spedizione: D-VI19014958
Lieferanzeige/Packing list/B.L.

Marca: MVAPML (MAXIVAL)
Markenbezeichnung
Brand / Nuance

Punzonatura: 316/316L
Kennzeichnung
Marking
Marquage

SPECIFICHE :

Note:

Anforderungen / Requirements / Edigences

Aufzeichnungen / Notes / Notes

VSI 0 316/316L A,CF
AISI 316/316L
AMS 5648 M S31600 A
AMS 5653 H S31603 A,CF
AMS-QQ-S-763 D 316/316L (0)
ASME SA182 2017 S31600/03 (1)
ASME SA193 2017 B8M (2)
ASME SA276 2017 S31600/03 A,CF (3)
ASME SA320 2017 B8M (4)
ASME SA479 2017 S31600/03 A (5)
ASTM A182 2018 S31600/03 (6)
ASTM A193 2017 B8M (7)
ASTM A262 2015 PRACTICE E
ASTM A276 2017 S31600/03 A,CF
ASTM A314 2015 S31600/03
ASTM A320 2017A B8M (8)
ASTM A370 2017
ASTM A473 2001 S31600/03 (9)
ASTM A479 2018 S31600/03 A
MIL-S-862 B/1 316/316L
QQ-S-763 F 316/316L (A)

(0)Chemical analysis only.
(1)Section II Part A 2017 EDITION Chemical analysis only.
(2)Section II Part A 2017 EDITION Chemical analysis only.
(3)Section II Part A 2017 EDITION
(4)Section II Part A 2017 EDITION Chemical analysis only.
(5)Section II Part A 2017 EDITION
(6)Chemical analysis only.
(7)Chemical analysis only.
(8)Chemical analysis only.
(9)Chemical analysis only.
(A)Chemical analysis only.

3893049
525399
Load # 49760

Tolleranza: ASTM A484-18A TABLE 7

Tolerance/Allowance/Tolerance

Pos. nr. Pos. nr. No. de poste	Oggetto Gegenstand Product description Design. du produit	Dimensioni - In Abmessungen Dimension Dimension	Lunghezza - In Länge Length Langueur	Colata Schmelze Yeast Coulée	Pezzi Stückzahl Pieces Pièces	Peso - LB Gewicht Weight Poids	Lotto nr. Loseil. Lot no. Lot no.
0040	Round	0,2500	146/ 146	279009		2,456	827008050

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

1) L=Longitudinale/Along, T=transversale/Quer, Q=Transversale/Quer

TEST	Provetta/ Probestück Spezimen/Eprobestück Larg.diam. Epave. Breda Diam. Dicke Width Diam. Thickness Larg. diam. epave mm	°F	Pesiz. Saggio Probesize Einfuchment g	Sneramento Streckgrenze Yield Stress Limite elastique Rp 0,2% k.s.l.	Sneramento Streckgrenze Yield Stress Limite elastique	Resistenza Zugfestigkeit Tensile strength Resistencia a traccion Rm k.s.l.	Allungamento Bruchdehnung Elongation Allongement E 4d %	Strizione Einziehdehnung Reduction of area Ectation RA %	Resilienza Kerbschlagenergie Impact Value Resilience	Durezza Härte Hardness Durete HB
Valori richiesti Anforderungen/Required values Valeurs demandées			min max	45	-	90	30	40	-	140 255
A	6,35	68	L	97		116	34	64		253

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		6

Vicenza, 21/05/19 VCC008 - MEST413058 (Mod. MCE2)	Il collaudatore di stabilimento der Werksachverständige / Works Inspector / L'agent d'usine M.RIZZOTTO <i>M. Rizzotto</i>	Direzione Qualità Qualitätsmanagement/Quality Management/Qualität R.BERTELLI <i>R. Bertelli</i>	Direzione Prodotto Produktmanagement/Product Management/Direction Produit P.MESSORI <i>P. Messori</i>	Pagina 1 di 2
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 Lieferzustand: Hot rolled - Annealed Cold Drawn
 Delivery state: Hot rolled - Annealed Cold Drawn
 Etat de livraison: Hot rolled - Annealed Cold Drawn

Produttore:
 Hersteller/Item/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 902007358 Stock - Canada
 Bestell: 902007358
 Your order: 902007358
 Commande: 902007358

Tipo di Elaborazione: E+AOD
 Erhitzungsart: 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: EI19001581
 Works/Our Order/Ref nr.

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

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

MR

Avviso di Spedizione: D-VI19014958
 Lieferanzahl/Packing list/B.L.

Marca: MVAPML (MAXIVAL)
 Markenbezeichnung: MVAPML (MAXIVAL)
 Brand / Nuance: MVAPML (MAXIVAL)

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

Mechanical properties according to ASTM A370.

Analisi chimica

Chemische Zusammensetzung/Chemical Analysis/Analyse chimique

Colata / Heat	min - max	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				
Schmelze/Coulee	C %	SI %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %			
279009	0,015	0,49	1,50	16,91	2,04	0,50	10,05	0,119	0,029	0,030	0,054			

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 = 842,3 : 1
 Annealing temperature : 1940° F for 0.5h/water.
 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 antimiscelanza: OK
 Verwechslungsprüfung: spezialanalytisch durchgeführt
 Antimixing testing performed: OK
 Contrôle antimélange fait: r.a.a.

Controllo visivo e dimensionale: soddisfa le esigenze
 Beschäftigung und Ausmessung: ohne Beanstandung
 Visual inspection and dimensional checks/satisfactory
 Contrôle visuel et dimension: 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 : 2015, IATF 16949 : 2016, AS 9100D

The Quality Management System is Certified acc. Pressure Equipment Directive 2014/68/EU Annex 1, chap.4.3 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 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, 21/05/19
 VCC008 - MEST413058
 (Mod. MCE2)

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

Direzione Qualità
 Qualitätsmanagement/Quality Management/Qualité
 R.BERTELLI

Direzione Prodotto
 Produktmanagement/Product Management/Direction Product
 P.MESSORI

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