



Acciaierie Valbruna S.p.A.

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

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

Certificato nr. MEST762641 / 2021 /
 Prüfung/Test/Essai

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

Stato di fornitura: Hot rolled Polished Annealed
 Lieferzustand: Peeled
 Delivery state:
 Etat de livraison:

Produttore:
 Hersteller/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 104308683 RELIANCE PROGRA
 Bestell: Your order
 Commande

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

Marchi di Fabbrica:
 Zeichen des Unternehmens
 Trade mark
 Signos de fusina productrice



Conferma ordine nr: EI21005199
 Werk/Gur Order/Ref. nr.

Qualità: 316/316L
 Werkstoff/Grade/Nuance

Punzone del Collaudatore:
 Stempel des Wertsachverständigen
 Inspector's stamp/Pointon de l'assesseur

MR

Avviso di Spedizione: D-VI21015945
 Lieferanweisung/Packing instr. L.

Marca: MVAPML (MAXIVAL)
 Markenbezeichnung
 Brand / Nuance

Punzonatura: 316/316L
 Kennzeichnung
 Marking
 Marquage

SPECIFICHE :

Anforderungen / Requirements / Exigences

Notiz:

Aufzeichnungen / Notes / Notes

VSI 0. 316/316L A
 AISI 316/316L
 AMS 5648 M S31600 A
 AMS 5653 J S31603 A
 AMS-QQ-S-763 D 316/316L A
 ASME SA182 2019 S31600/03 A (0)
 ASME SA193 2019 B8M CLASS 1 (1)
 ASME SA276 2019 S31600/03 A (2)
 ASME SA320 2019 B8M CLASS 1 CLASS1 (3)
 ASME SA479 2019 S31600/03 A (4)
 ASTM A182 2020 S31600/03 A (5)
 ASTM A193 2020 B8M CLASS 1
 ASTM A262 PR. E 2015 316/316L
 ASTM A276 2017 S31600/03 A
 ASTM A314 2019 S31600/03
 ASTM A320 2018 B8M CLASS 1 CLASS1
 ASTM A370 2020
 ASTM A473 2019 S31600/03 (6)
 ASTM A479 2020 S31600/03 A
 MIL-S-862 B/1 316/316L
 NACE MR0103 2015 S31600/03 A (7)
 NACE MR0175 2015 S31600/03 A (8)
 QQ-S-763 F 316/316L A

(0)Section II Part A 2019 EDITION For products machined directly from bar refer to ASME SA479.

(1)Section II Part A 2019 EDITION

(2)Section II Part A 2019 EDITION

(3)Section II Part A 2019 EDITION

(4)Section II Part A 2019 EDITION

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

(6)Chemical analysis only.

(7)ANSI/NACE MR0103/ SO 17945 November 23, 2015

(8)ANSI/NACE MR0175/ SO 15156-3, third edition November 23,2015

R278331
 509358
 Load #51767

Tolleranza: ASTM A484-20B TABLE 7

Toleranz/Allowance/Tolerance

Pos. nr. Pos. nr. N. de piece	Oggetto Gegenstand Product description Design. du produit	Dimensioni - in Abmessungen Dimension Dimension	Lunghezza - in Länge Length Longueur	Colata Schmelze Molten Coulée	Pezzi Stücke Pieces Pièces	Peso - LB Gewicht Weight Poids	Lotto nr. Losn. Lot nr. Lot nr.
0050	Round	4,0000	156/ 158	434671	4	2.258	112010340

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER ACCORDING TO ISO 9001 : 2015, IATF 16949 : 2016, AS 9100D

Vicenza, 21/06/2021
 VCG052 - MEST762641

Direzione Qualità
 Qualitätsmanagement/Quality Management/Direction Qualité
 R.BERTELLI

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

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ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 104008683 RELIANCE PROGRA
 Bestell: Your order: Commande

Tipo di Elaborazione: E+AOD
 Erweichungszustand: Making process: Mode d'elaboration:

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



Conferma ordine nr: EI21005199
 Works/Our Order/Ref. nr.

Qualità: 316/316L
 Werkstoff/Grade/Numéro

Punzone del Collaudatore:
 Stempel des Werkstoffverständigen: Inspecteur à stamp/Pointon de l'essayeur

MR

Avviso di Spedizione: D-VI21015945
 Lieferanzeige/Packing list/B.L.

Marca: MVAPML (MAXIVAL)
 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	Proveita/ Probe Sachmang/Probe Long diam. Basis Grain Diam. Code Wegh. Diam. Thickness Long. diam. basis mm	°F	Posiz. Saggio Probenort Location Orientation		Snervamento Streckgrenze Yield Stress Limite élastique Rp 0.2%		Snervamento Streckgrenze Yield Stress Limite élastique		Resistenza Zugfestigkeit Tensile strength Resistance à traction Rm		Allungamento Bruchdehnung Elongation Allongement E 4p		Strizione Einschnürung Reduction of area Étirage RA		Resilienza Kernschlagwert Impact Value Resilience		Durezza Härte Hardness Dureté HB		
			min	max	30	-	75	115	-	40	-	50	-	-	140	223			
A	12,5	68	L	42	-	84	-	60	-	72	-	-	-	-	-	-	-	174	-

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		6

Mechanical properties according to ASTM A370.

Analisi chimica

Chemische Zusammensetzung/Chemical Analysis/Analyse chimique

Corona Heat Schmelze/Coilno	min - max	0,030	1,00	1,25 2,00	16,00 18,00	2,00 3,00	1,00	10,00 14,00	-	0,040	0,020 0,030	-	0,100	-	-	-	-
434671	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %	-	-	-	-	-	-
	0,018	0,59	1,78	16,78	2,05	0,52	10,25	0,106	0,027	0,021	0,074	-	-	-	-	-	-

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 = 30,1 : 1
 Material annealed 1940°F for 2 h/water cooled.
 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 est trouvé conforme aux exigences

Controllo antimiscelazione con tecnica XRF/OES portatile: OK
 Verwechslungsprüfung: durch XRF/OES Gerät geführt.
 Antimixing testing performed with XRF/OES portable: OK
 Contrôle antimélange s-r technique XRF/OES portable: OK

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

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER ACCORDING TO ISO 9001 : 2015, IATF 16949 : 2016, AS 91000

Vicenza, 21/06/2021 VCC052 - MEST762641	Direzione Qualità Quality Management/Qualitätsmanagement/Direction Qualité R.BERTELLI	Direzione Prodotto Produktmanagement/Product Management/Direction Produit P.MESSORI	Pagina 2 di 3
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Mode d'elaboration:

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Zeichen des Lieferwerkes
Trade marks
Signes de l'usine productrice



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Kennzeichnung:
Marking
Marquage

Melted, poured 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 by the portal system when it leaves the production plant.

The Quality Management System is also Certified according Pressure Equipment Directive 2014/68/EU Annex 1, chapt.4.3 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.
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.

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VCC052 - MEST762641

Direzione Qualità
Quality Management/Quality Management/Qualität
R. BERTELLI

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Product Management/Product Management/Direction Produit
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