



Acciaierie Valbruna S.p.A.

36100 VICENZA (Italia) - Viale della scienza, 25 z.l.
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 / ISO 10474 (2013), 3.1**

Certificato nr. MEST831890 / 2021 /
Prüfung/Text/Essai

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

Stato di fornitura: Forged - Annealed Peeled
Lieferzustand
Delivery state
Etat de livraison

Produttore:
Hersteller/Item/Usina productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 109008975 RELIANCE PROGRA
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: EI21011652
Werkst/Our Order/Ref nr.

Qualità: 316/316L
Werkstoff/Grade/Nuance

Punzone del Collaudatore:
Stempel des Werksachsvorständigen
Inspector's stamp/Polçnon de l'essayeur

MR

Avviso di Spedizione: D-VI21027016
Lieferanzfolge/Packing list/B.L.

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 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 2021 S31600/03 A (5)
ASTM A193 2020 B8M CLASS 1
ASTM A282 PR. E 2015 316/316L (6)
ASTM A276 2017 S31600/03 A
ASTM A314 2019 S31600/03
ASTM A320 2018 B8M CLASS 1 CLASS1
ASTM A370 2020 .
ASTM A473 2021 S31600/03 (7)
ASTM A479 2020 S31600/03 A
MIL-S-882 B/1 316/316L
NACE MR0103 2015 S31600/03 A (8)
NACE MR0175 2015 S31600/03 A (9)
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)Reapproved 2021
(7)Chemical analysis only.
(8)ANSI/NACE MR0103/ISO 17945 November 23, 2015
(9)ANSI/NACE MR0175/ISO 15156-3, third edition November 23,2015

Tolleranza: ASTM A484-20B TABLE 3

Pos. nr. Pos. nr. Item nr. Nr. de poste	Oggetto Gegenstand Product description Descrip. du produit	Tolleranza/Allowance/Tolerance		Lunghezza,- In Länge Length Longueur	Colata Schmelze Heat Coutée	Pezzi Stückzahl Pieces Pièces	Peso - LB Gewicht Weight Poids	Lotto nr. Losst. Lot nr. Lett. nr.
		Dimensioni - In Abmessungen Dimension Dimension						
0040	Round	11,0000		144/ 144	286973		7.915	116712630

P.O.#: PIA3924
 R#: R171254
 ITEM#: 509382
 HEAT#: 286973
 BRANCH#: 875

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

Vicenza, 04/11/2021 VCQ052 - MEST831890	Direzione Qualità Qualitätsmanagement/Quality Management/Qualität Qualität R.BERTELLI	Direzione Prodotto Produktmanagement/Product Management/Direction Produit P.MESSORI	Pagina 1 di 3
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1/19 / 2022.



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NachAccording toSalon

Prüfung/Ins/Essai

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VALBRUNA CANADA LTD
 8724 HOLTGATE CRESCENT
 L5T 5Z1 - MILTON, ONT L5T 5Z1 - CA

Stato di fornitura: Forged - Annealed Peeled
 Lieferzustand
 Delivery state
 Etat de livraison

Produttore:
 Hersteller/Hersteller/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 109008975 RELIANCE PROGRA
 Bestell
 Your order
 Commande

Tipo di Elaborazione: E+AOD
 Eschmelzungsart
 Milling process
 Mode d'elaboration

Marchi di Fabbrica:
 Zeichen des Lieferwerkes
 Trade marks
 Siglas de la Usine productrice



Conferma ordine nr: EI21011652
 Works/Our Order/Ref nr.

Qualità: 316/316L
 Werkstoff/Güteart/Nummer

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

MR

Avviso di Spedizione: D-VI21027016
 Lieferanweisung/Packing instr.L.

Marca: APM L
 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'etat de fourniture Prueba sobre el material así como entregado

TEST	Provetta/ Spezimen/Éprouvette Lung./Läng./Diam./Diam. Weich./Diam./Tollhöhe Läng./Diam./epais mm	°F	Posiz. Bogge Position Locus Emplacement N	Sneramento	Sneramento	Resistenza	Allungamento	Strizione	Resilienza	Durezza
				Streckgrenze Yield Stress Limite elasticoo Rp 0,2% k.s.l.	Streckgrenze Yield Stress Limite elasticoo	Zugfestigkeit Tensile strength Résistance à la traction Rm k.s.l.	Bruchdehnung Elongation Allongement E 4d %	Einbruchung Reduction of area Striction RA %	Kerbschlagarbeit Impact Value Resistance	Hardness Dureté HB
Valori richiesti	min	max		30	-	75	40	50	-	140
Anforderungen/Required values Valeurs demandées						115				223
A	12,5	68	L	37		81	62	71		169

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

Grade / Mat	min	max	1,25	16,50	2,00	10,00	0,020	0,020	0,030	0,100	-	-	-	-
Stahlgüte/Grade	0,030	1,00	2,00	18,00	3,00	14,00	0,040	0,030	0,100	-	-	-	-	-
	C %	SI %	Mn %	Cr %	Mo %	Cu %	NI %	Co %	P %	S %	N %	-	-	-
286973	0,016	0,58	1,69	16,68	2,05	0,68	10,00	0,152	0,029	0,028	0,091	-	-	-

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 = 4,2 : 1
 Material annealed 1976°F for 6,5h/water cooled.
 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 livré conforme aux exigences

Controllo antimiscelanza con tecnica XRF/OES portatile: OK
 Verwachsungprüfung: durch XRF/OES Gerät gelührt.
 Antimixing testing performed with XRF/OES portable: OK
 Contrôle antimélange svf technique XRF/OES portable: OK

Controllo visivo e dimensionale: soddisfa le esigenze
 Beschligung 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 9100D

Vicenza, 04/11/2021 VCQ052 - MEST831890	Direzione Qualità Quality Management/Qualität Management/Qualité R.BERTELLI	Direzione Prodotto Product Management/Produkt Management/Direktion Produkt P.MESSORI	Pagina 2 di 3
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Prüfung/Tas/Essai

Cilente / Besteller/Purchaser/Client
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8724 HOLLGATE CRESCENT
L5T 5Z1 - MILTON, ONT L5T 5Z1 - CA

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Lieferzustand
Delivery state
Etat de livraison

Produttore:
Hersteller/Item/Usine producer

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 109008976 RELIANCE PROGRA
Bestell
Your order
Commande

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

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



Conferma ordine nr: EI21011652
Works/Our Order/Ref. nr.

Qualità: 316/316L
Werkstoff/Grade/Numero

Punzone del Collaudatore:
Stempel des Werkstoffversuchsingen
Inspector's stamp/Plaqueon de l'essayeur



Avviso di Spedizione: D-VI21027016
Lieferanzalge/Packing list/B.L.

Marca: APML
Markenbezeichnung
Brand / Numero

Punzonatura: 316/316L
Kennzeichnung
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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.
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.

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

Vicenza, 04/11/2021
VCO052 - MEST831890

Direzione Qualità
Qualitätsmanagement/Quality Management/Gestion Qualité

R.BERTELLI

Direzione Prodotto
Produktmanagement/Product Management/Direction Produit

F.MESSORI

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