



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 / ISO 10474 (2013), 3.1

Certificato nr. MEST805360 / 2021 /

Nach/According to/Scien

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 Peeled

Lieferzustand
Delivery state
Etat de livraison

Produttore:
Hersteller/Usine 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 fusine productrice



Conferma ordine nr: EI21011652

Werks/Our Order/Ref. nr.

Qualità: 316/316L

Werkstoff/Grade/Nuance

Punzone del Collaudatore:
Stempel des Werkssachverständigen
Inspector's stamp/Poinçon de l'essayeur

MR

Avviso di Spedizione: D-VI21022618

Lieferanzeige/Packing list/B.L.

Marca: APLM

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 A262 PR. E 2015 316/316L
ASTM A276 2017 S31600/03 A
ASTM A314 2019 S31600/03 A
ASTM A320 2018 B8M CLASS 1 CLASS1
ASTM A370 2020
ASTM A473 2019 S31600/03 A (6)
ASTM A479 2020 S31600/03 A
MIL-S-862 B/1 316/316L
NACE MRC103 2015 S31600/03 A (7)
NACE MRC175 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/ISO 17945 November 23, 2015

(8)ANSI/NACE MR0175/ISO 15156-3. third edition November 23 2015

Tolleranza: ASTM A484-20B TABLE 3

Tolleranza/Allowance/Tolerance

Pos. nr. Pos. n. Item n. Nr. de poste	Oggetto Gegenstand Product description Descrip. du produit	Dimensioni - In Abmessungen Dimension Dimension	Lunghezza - In Länge Length Longueur	Colata Schmelze Heat Coulée	Pezzi Stückzahl Pieces Pièces	Peso - LB Gewicht Weight Poids	Lotto nr. Losn. Lot nr. Lett. nr.
0040	Round	11,0000	135/ 135	286142		7.443	113815470

P.O.#: P123851
R#: R170461
ITEM#: 509382
HEAT#: 286142
BRANCH#: 875

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

Vicenza, 21/09/2021 VCQ052 - MEST805360	Direzione Qualità Quality Management/Quality Management/Gestion Qualité R.BERTELLI	Direzione Prodotto Produktmanagement/Product Management/Direction Produit P.MESSORI	Pagina 1 di 3
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 Hersteller/fabrik/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 109008975 RELIANCE PROGRA
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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: EI21011652

Qualità: 316/316L
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Avviso di Spedizione: D-VI21022618
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Marca: APLM
 Markenbezeichnung
 Brand / Nuance

Punzonatura: 316/316L
 Kennzeichnung
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TEST ALLO STATO DI FORNITURA

Test on delivery condition / Prüfung auf lieferbarem produkt / test a l'etat de fourniture / Prueba sobre el material asi como entregado

TEST	Provetta/ Probe/é Specimen/Eprouvette Larg. diam. Spess. Bras. Diam. Dicks. Width Diam. Thickness Larg. diam. épais. mm	°F	Posiz. Saggio Fraisage Location Emplacement	Snervamento		Resistenza	Allungamento		Strizione		Resilienza	Durezza
				Stressgrenze Yield Stress Limite élastique Rp 0,2% k.s.i.	Stressgrenze Yield Stress Limite élastique	Zugfestigkeit Tensile strength Resistance à traction Rm k.s.i.	Bruchdehnung Elongation Allongement E 4d %	Einschnürung Reduction of area Striction RA %	Kerbschlagarbeit Impact Value Resilience	Haerte Hardness Dureté HB		
Valori richiesti	min			30	-	75	-	40	-	50	-	140
Anforderungen/Required values Valeurs demandées	max					115						223
A	12,5	68	L	39		82		62		73		162

TEST ALLO STATO DI FORNITURA

Test on delivery condition / Prüfung auf lieferbarem produkt / Test a l'etat de fourniture / Prueba sobre el material asi 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/Coulee	min - max	0,030	1,00	1,25 2,00	16,50 16,00	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 %					
286142	0,018	0,31	1,78	16,71	2,04	0,55	10,09	0,153	0,029	0,029	0,084					

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 pend 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.
 Material annealed 1940°F for 5h/water cooled.
 Reduction ratio = 4,6 : 1
 Material is DFARS Compliant

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

Controllo antimescolanza con tecnica XRF/OES portatile : OK
 Verwechslungsprüfung durch XRF/OES Gerät geführt.
 Antimixing testing performed with XRF/OES portable OK
 Contrôle antimélange svr technique XRF/OES portable OK

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

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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 portable system when it leaves the production plant.

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

WSP/PS/AL/HC/11234/02/18/CC/01/21/01/175A

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Vicenza, 21/09/2021

Direzione Qualità
Qualitätsmanagement/Quality Management/Gestion Qualité

Direzione Prodotto
Produktmanagement/Product Management/Direction Produit

VCQ052 - MEST805360

R.BERTELLI

P.MESSORI

Pagina
3 di 3