



Acciaierie Valbruna S.p.A.

36100 VICENZA (Italia) - Viale della scienza, 25 z.l.
Telefono 0444.969211 - Fax 0444.963836
Stab.: 36100 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. MEST742973 / 2021 /

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 Peeled
Lieferzustand
Delivery state
Etat de livraison

Produttore :
Hersteller/Hersteller
Hersteller

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr. 105008747 RELIANCE PROGRA
Bestell.
Your order
Commande

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

Marchi di Fabbrica:
Zeichen des Lieferwerkes
Trade marks
Sigles du fondeur producteur



Conferma ordine nr: EI21006255

Qualità: 316/316L
Werkstoff/Grade/Nuance

Punzone del Collaudatore:
Stempel des Werksachverständigen
Inspector's stamp/Inspector's assay

MR

Avviso di Spedizione: D-VI21012802
Lieferanzeige/Packing list/V.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)

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

ASME SA193 2019 B8M CLASS 1 (1)

(1)Section II Part A 2019 EDITION

ASME SA276 2019 S31600/03 A (2)

(2)Section II Part A 2019 EDITION

ASME SA320 2019 B8M CLASS 1 CLASS1 (3)

(3)Section II Part A 2019 EDITION

ASME SA479 2019 S31600/03 A (4)

(4)Section II Part A 2019 EDITION

ASTM A182 2020 S31600/03 A (5)

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

ASTM A193 2019 B8M CLASS 1

ASTM A262 PR. E 2015 316/316L

ASTM A276 2017 S31600/03 A

ASTM A314 2019 S31600/03

ASTM A320 2016 B8M CLASS 1 CLASS1

ASTM A370 2020 (6)

(6)2015E1

ASTM A473 2019 S31600/03 (7)

(7)Chemical analysis only.

ASTM A479 2020 S31600/03 A

MIL-S-862 B/1 316/316L

NACE MR0103 2015 S31600/03 A (8)

(8)ANSI/NACE MR0103/ISO 17945 November 23, 2015

NACE MR0175 2015 S31600/03 A (9)

(9)ANSI/NACE MR0175/ISO 15156-3, third edition November 23, 2015

QQ-S-763 F 316/316L A

Tolleranza: ASTM A484-208 TABLE 3

Pos. nr. Pos. nr. No. de poste	Oggetto Gegenstand Produit description Objet du produit	Tolleranza/Allowance/Tolerance		Lunghezza - in Länge Length Longueur	Colata Schmelze Melt Coulée	Pezzi Stücke Pieces Pièces	Peso - LB Gewicht Weight Poids	Lotto nr. Losn. Lot No. Lot. No.
		Dimensioni - in Abmessungen Dimension Dimensions						
0050	Round	11,0000		137/ 137	285050		3.816	1C3517130

P.O.#: PI23370
R#: R168706
ITEM#: 509382
HEAT#: 285050
BRANCH#: 875

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

Vicenza, 20/05/2021 VCC052 - MEST742973	Direzione Qualità Qualitätsmanagement/Quality Management/Gestion de Qualité R. BERTELLI	Direzione di Produzione Produktmanagement/Production Management/Direction de Production P. MESSORI	Pagina 1 di 3
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8/25/21
ANS

Provided by: ENCORE METALS DIVISION OF RMCI



Acciaierie Valbruna S.p.A.

36100 V. GENZA (Italia) - Viale della scienza, 23 z.l.
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Hersteller/Item/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: 105008747 RELIANCE PROGRA
Bestell
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Tipo di Elaborazione: E+AOD
Erschmelzungsart
Melting process
Mode d'o elaboration

Marchi di Fabbrica:
Zeichen aus Lieferwerk
Trade marks
Sigles de l'usine productrice



Conferma ordine nr: EI21006255
Werkst/Our Order/Ref. nr.

Qualità: 316/316L
Werkstoff/Grade/Nuance

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

MR

Avviso di Spedizione: D-VI21012802
Lieferanzeige/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	Proveita/ Probes System/Eprouvette Long. diam. Close Wich. Diam. Thickness Long. diam. epais mm	Posiz. Sagitt. Profilage Lieu Orientation °	Snervamento Zugproben Yield Stress Limite élastique Rp 0,2% N.A.I.	Snervamento Zugproben Yield Stress Limite élastique N.A.I.	Resistenza Zugfestigkeit Tensile strength Résistance à traction Rm K.s.I.	Allungamento Bruchdehnung Elongation Allongement E 4d %	Strizione Einschnürung Reduction of area Striction RA %	Resilienza Kerbschlagarbeit Impact Value Resilience	Durezza Härte Hardness Dureté HB
	Valori richiesti Anforderungen/Requisit Values demandées	min max		30	-	75 115	- 40	- 50	-
A	12,5	68	L	37	81	63	73		167

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

Colata / Heat Schmelze/Coulee	min	1,25	16,50	2,60	10,00	0,020	0,020	0,020	0,030	0,100				
max	0,030	1,00	2,00	13,00	3,00	1,00	14,00		0,040	0,030	0,100			
	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %			
285050	0,018	0,43	1,73	16,67	2,02	0,50	10,00	0,142	0,032	0,023	0,089			

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

Sono state soddisfatte tutte le condizioni richieste
Die gezeigten Anforderungen sind in Ansehung erfüllt
The material has been furnished in accordance with the requirements
Le matiere a été livrée conforme aux exigences

Controllo antimiscelazione con tecnica XRF/OES portatile: OK
Verwechslungsprüfung durch XRF/OES Gerät gefulrt
Antimixing testing performed with XRF/OES portable OK
Contrôle antimélange test 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 dimensionnel satisfaisant

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Vicenza, 20/05/2021 VCC052 - MEST742973	Direzione Qualità Qualitätsmanagement/Quality Management/Gestion Qualité R. BERTELLI	Direzione Prodotto Produktmanagement/Product Management/Direction Produit P. MESSORI	Pagina 2 di 3
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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 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.

WSP000123-15400000-14000-2017

Provided by: ENCORE METALS DIVISION OF RMCL

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

Vicenza, 20/05/2021 VCO052 - MEST742973	Direzione Qualità Quality Management/Quality Management/Direction Qualité R.BERTELLI	Direzione Prodotto Produktmanagement/Product Management/Direction Produit P.MESSORI	Pagina 3 di 3
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