

SN 6410 10 FOE 60/XS



Acciaierie Valbruna S.p.A.

36100 VICENZA (Italia) - Viale della scienza 25 z.l.
 Telefono 0444.968211 - Fax 0444.963836
 Stab. 39100 BOLZANO (Italia) - V. 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. **MEST868523 / 2022 /**
 Prüfung/Tes/Essai

Cliente / Besteller/Purchase/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/Werkschneidwerk

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr: **111009149 RELIANCE PROGRA**
 Bestell
 Your order
 Commande

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

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



Conferma ordine nr: **EI21015024**
 Werks/Our Order/Ref. nr.

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

Punzone del Collaudo:
 Stempel des Werkschneidwerkstempelgen
 Inspector's stamp/Inspection de l'inspecteur

MR

Avviso di Spedizione: **D-VI2200*450**
 Lieferanzeige/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 2021 B8M CLASS 1 (1)
 ASME SA276 2021 S31600/03 A (2)
 ASME SA320 2021 B8M CLASS 1 CLASS1 (3)
 ASME SA479 2021 S31600/03 A (4)
 ASTM A182 2021 S31600/03 A (5)
 ASTM A193 2020 B8M CLASS 1
 ASTM A262 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 2021
 ASTM A473 2021 S31600/03 (7)
 ASTM A479 2021 S31600/03 A
 MIL-S-862 B/1 316/316L
 NACE MRC103 2015 S31600/03 A (8)
 NACE MRC175 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 2021 EDITION

(2)Section II Part A 2021 EDITION

(3)Section II Part A 2021 EDITION

(4)Section II Part A 2021 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 15166-3, third edition November 23,2015

P.O.#: **P123988**
 R#: **R172312**
 ITEM#: **521534**
 HEAT#: **287123**
 BRANCH#: **875**

Tolleranza: ASTM A484-20B TABLE 3

Pos. nr. Pos. nr. Item nr. Nr. de pozii	Oggetto Gegenstand Product description Descrip. de produs	Dimensioni - in		Lunghezza - in Länge Length Longueur	Colata Schmelze Heat Coulée	Pezzi Stücke Pieces Pièces	Peso - LB Gewicht Weight Poids	Lotto nr. Losn. Lot nr. Lotiv
		Abmessung Dimension Dimension	Abmessung Dimension Dimension					
0040	Round	13.0000		147/ 147	287123		5 677	129116300

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

Vicenza, 18/01/2022 VCO052 - MEST868523	Direzione Qualità Qualitätsmanagement/Quality Management/Gestion Qualité R.BERTELLI	Direzione Prodotto Produktmanagement/Product Management/Direction Produit P.MESSORI	Pagina 1 di 3
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3/17/22



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

Certificato nr. MEST868523 / 2022 /
 Prüfling/Test/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/Hersteller/Usine productrice

ACCIAIERIE VALBRUNA S.P.A.

Ordine nr. 111009149 RELIANCE PROGRA
 Bestell / Your order / Commande

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

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



Conferma ordine nr. EI21015024
 Vertrags-/Our Order/Ref. nr.

Qualità: 316/316L
 Werkstoff/Grade/Nuance

Funzione del Collaudatore:
 Stempel des Werksachverständigen
 Inspector's stamp/Inconn de l'essayeur

MR

Avviso di Spedizione: D-VI22001450
 Lieferanzeige/Packing list/B.L.

Marca: APML
 Markenbezeichnung
 Brand / Nuance

Funzionatura: 316/316L
 Kennzeichnung
 Marking
 Marquage

TEST ALLO STATO DI FORNITURA										
Test on delivery condition / Prüfung auf lieferbarem produkt / Test a l'état de fourniture / Prueba sobre el material así como entregado										
TEST	Provetta/ Probe/Loi Section/Éprouvette Larg. diam. Spess. Brak. Diam. Dicke Wahl. Diam. Thickness Larg. diam. épous. mm	Posiz. Saggi/ Prüfung/ Location Emplacement °	Snervamento Speck/entree Yield Stress Limite élastique Rp 0,2% k.s.l.	Snervamento Ereickigung Yield Stress Limite élastique	Resistenza Zugfestigkeit Tensile strength Résistance à la traction Rm k.s.l.	Allungamento Bruchdehnung Elongation Allongement E 4d %	Strizione Einschnürung Reduction of area Striction RA %	Resilienza Kerbschlagenergie Impact Value Resilience	Durezza Härte Hardness HB	
Valori richiesti		min	30	-	75	-	40	-	-	140
Anforderungen/Required values Valeurs éliminées		max			115					223
A	12,5	68	L	39	81	59	77			166

TEST ALLO STATO DI FORNITURA		
Test on delivery condition / Prüfung auf lieferbarem produkt / Test a 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												
Coletta / Heat Schmelzprobe/Coûle	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %	
287123	0,016	0,39	1,74	16,61	2,07	0,55	10,09	0,152	0,029	0,024	0,099	

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 = 4,7 : 1
 Material annealed 1976°F for 7 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 a été trouvé conforme aux exigences	Controllo antimiscelanza con tecnica XRF/OES portatile: OK Verwechslungsprüfung durch XRF/OES Gerät gefolgt. Antmixing testing performed with XRF/OES portable: OK Contrôle antimélange svr technique XRF/OES portable: OK	Controllo visivo dimensionale: soddisfatta le esigenze Besichtigung und Ausmessung: ohne Beanstandung Visual inspection and dimensional checks: satisfactory Contrôle visuel et dimensionnel: satisfaisant
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QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER ACCORDING TO ISO 9001 : 2015, IATF 16949 : 2016, AS 9100D			
Vicenza, 18/01/2022 VCC052 - MEST868523	Direzione Qualità Qualitätsmanagement/Quality Management/Gestion Qualité R. BERTELLI	Direzione Prodotto Produktmanagement/Product Management/Création Produit P. MESSORI	Pagina 2 di 3



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8724 HOLLGATE 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: 11'009149 RELIANCE PROGRA

Tipo di Elaborazione: E+ADD
Erschmelzungsort
Melting process
Mode d'elaboration

Marchi di Fabbrica:
Zeichen des Lieferwerkes
Trace marks
Signes de l'usine productrice



Bestell
Your order
Commande

Conferma ordine nr: EI2'015C24

Qualità: 316/316L
Werkstoff/Grade/Nuance

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

MR

Werkst/Our Order/Ref nr

Avviso di Spedizione: D-VI22001450

Marca: APML
Markenbezeichnung
Brand / Nuance

Punzonatura: 316/316L
Kenntzeichnung
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.
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.

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

Vicenza, 18/01/2022
VCQ052 - MEST868523

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

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

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