

259896 - 8.5 in

C085594

Acciaierie Valbruna S.p.A.



QUALITY MANAGEMENT SYSTEM
CERTIFIED BY LLOYD'S REGISTER

CERTIFICATO DI COLLAUDO ABNAHMEPRUEFZEUGNIS INSPECTION CERTIFICATE CERTIFICAT DE RECEPTION EN 10204 (2004) , 3.1

36100 VICENZA (Italia) - Viale della scienza, 25 z.i.
Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4

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

Produttore: ACCIAIERIE VALBRUNA S.P.A.
Hersteller/Item/Usine producer

Avviso di Spedizione: D-VI13010847
Lieferanzzeit/Packing list/BL

Certificato nr: MEST332242/2013/
Prüfung/Test/Essai

Conferma ordine nr: E112008592
Works/Our Order/Ref nr.

Marchio di Fabbrica:
Zeichen des Lieferanten
Trade mark
Siglo de fusine producer



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

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

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

Specifiche:
Anforderungen / Requirements / Exigences
VAL CANADA 2 316/316L A
ASME SA182 2010 S31600/03 (0)
ASME SA479 2010 S31600/03 (3)
ASTM A262 2010 PRACTICE E
ASTM A320 2011A B8M
NACE MR0175 2009 S31600/03 A (5)

AMS 5648 L S31600 A
ASME SA193 2010 B8M (1)
ASTM A182 2011A S31600/03 (4)
ASTM A276 2010 S31600/03
ASTM A479 2012 S31600/03
QQ-S-763 F 316/316L

AMS 5653 G S31603 A
ASME SA320 2010 B8M (2)
ASTM A193 2011A B8M
ASTM A314 2008 S31600/03
MIL-S-862 B/1 316/316L

- (0) SEC.II PT.A 2010 EDITION ADD. 2011a
- (1) SEC.II PT.A 2010 EDITION ADD. 2011a
- (3) SEC.II PT.A 2010 EDITION ADD. 2011a
- (5) ANSI/NACE MR0175/ISO 15156-3, second edition 2009-10-15

- (0) For products machined directly from bar refer to ASME SA479.
- (2) SEC.II PT.A 2010 EDITION ADD. 2011a
- (4) For products machined directly from bar refer to ASTM A479.
- (5) Technical circular 1:2011 Published 2011-05-14

Qualità: 316/316L
Werkstoff/Grade/Nuance

Marca: Name/Hersteller/Brand/Nuance	MVAPML MAXIVAL	Tolleranza: ASTM A484-11 Toleranz/Allowance/Tolerance	Punzonatura: 316/316L Kennzeichnung/Marking/Marquage
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Pos. nr. Pos. nr. Item nr. 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. Lot nr.
0090	Round	8,5000	200 / 206	259896		6.618	230403470

TEST ALLO STATO DI FORNITURA
Test on delivery condition Prüfung auf Lieferbereitem produkt test a l'etat de fourniture Prueba sobre el material así como entregado

TEST	Provetta/Probetas Specimen/Probeten Long. Diam. Stress Diam. Diam. Thickn. Long. diam. gage mm	°F	Snervamento Stooping Yield Stress Limite élastique Rp 0,2% k.s.i.	Snervamento Development Yield Stress Limite élastique	Resistenza Zugfestigkeit Tensile strength Resistance à traction Rm k.s.i.	Allungamento Bruchdehnung Elongation Allongement E 4d %	Strizione Enschmälung Reduction of area Striction RA %	Resilienza Kerbschlagarbeit Impact Value Resilience	Durezza Kerze Hardness Duroin HB
	Valori richiesti 1 Anforderungen/Required values Valeurs demandées	min max	30	-	75 115	- 40	- 50	-	140 223
A	12,5	68 L	38		82	57	68		169

TEST	min	max
A Grain size for ASTM E112		4

1) L=longitudinale/longs, T=trasversale/quer, Q=Tangenziale/tangentiel

Analisi chimica

Chemische Zusammensetzung/Chemical Analysis/Analyse chimique

Colata /Heat Schmelze/Coulée	min max	1,00	1,25 2,00	16,00 18,00	2,00 3,00	1,00	10,00 14,00	-	0,040	0,030	0,100	-	-	-	-
	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %				
259896	0,021	0,40	1,62	16,60	2,01	0,60	10,12	0,100	0,030	0,027	0,087				

Produced without class I-II Ozone depleting substances.
Solution heat treated free from continuous carbide network.
Annealing temperature: 1940°F for 1 h/water.
Micro and macro etch test: OK
Intergranular corrosion test per ASTM A262 pract. E: ok.
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 trouvé conforme aux exigences

Controllo animescolanza: OK
Vermischungsprüfung: spezialanalytisch durchgeführt
Alloying testing performed: OK
Controllo antimiscelazione: r.a.s.

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

Acciaierie Valbruna S.p.A.



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CERTIFICATO DI COLLAUDO
ABNAHMEPRUEFZEUGNIS
INSPECTION CERTIFICATE
CERTIFICAT DE RECEPTION
EN 10204 (2004) , 3.1

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

Produttore: **ACCIAIERIE VALBRUNA S.P.A.**
Hersteller/Item/Usine productrice

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

Avviso di Spedizione: D-VI13010847
Lieferanzugs/Packing list/B.L.

Ordine nr: 210003888 Stock - Canada
Bestell/Your order/Commande

Tipo di Elaborazione: E+AOD
Erschmelzungsart/Melting process/Mode of elaboration

Certificato nr: MEST332242/2013/
Prüfung/Test/Essai

Conferma ordine nr: EH2008592
Werks/Our Order/Ref nr.

Marchio di Fabbrica:
Zeichen des Lieferwerkes
Trade mark
Sigle de l'usine productrice



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



Melted 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 through Portal System when it leaves the production plant.

The Quality Management System is Certified acc. Pressure Equipment Directive (97/23/EC) Annex 1.s., 4.3 by TUEV 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.

Vicenza, 09/04/13
VCO008
(Mod. MCE2)

Il collaudatore di stabilimento / der Werkssachverständiger / Works inspector / L' agent d' usine

M. Rizzotto *[Signature]*

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