

# Acciaierie Valbruna S.p.A.



36100 VICENZA (Italia) - Viale della scienza, 25 z.I.  
 Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4  
 Cliente / Besteller / Purchaser / Client  
**VALBRUNA CANADA LTD**  
 8724 HOLLGATE CRESCENT  
 CDN-MILTON, ONT L5T 5Z1-CAN

Produttore: **ACCIAIERIE VALBRUNA S.P.A.**  
 Hersteller / Lieferant / Producer

Oggetto Prove: **Annealed Peeled**  
 Prüfgegenstand / Item inspected / Passage

Avviso di Spedizione: **D-VI05005309**  
 Lieferungs- / Packung / List N.

Ordine nr: **409-1180/ STOCK**  
 Bestell- / Your order / Commande

Tipo di Elaborazione: **E+AOD**  
 Erzeugnisart / Manufacturing process / Mode of elaboration

316SS  
 HT# 239396.  
**CERTIFICATO DI COLLAUDO**  
**ABNAHMEPRUEFZEUGNIS**  
**INSPECTION CERTIFICATE**  
**CERTIFICAT DE RECEPTION**  
**EN 10204 , 3.1.B**

Certificato nr: **MEST197433/2005/**  
 Prüfzeugnis / Certificate

Confirma ordine nr: **EI04007852**  
 Werk- / Our Order / Ref. nr.

Marchio di Fabbrica:  
 Zeichen des Lieferanten  
 Trade mark  
 Signe de l'usine productrice



Funzione del Collaudatore:  
 Funktion des Werkstoffprüfers  
 Inspector's stamp / Position of the Inspector

**Specifiche:**

Anforderungen / Requirements / Exigences

**VAL CANADA 2 316/316L A**  
 ASME (1) SA182 2001 S31600/03 (a)  
 ASME (1) SA479 2001 S31600/03 (a)  
 ASTM A262 2002A PRAC. A.C & E  
 ASTM A320 2004 B8M  
 MIL-S-862 B/1 316/316L  
 (0) SEC.II PT.A 2001 EDITION ADD.2002  
 (1) SEC.II PT.A 2001 EDITION ADD.2002  
 (3) SEC.II PT.A 2001 EDITION ADD.2002

**AMS 5648 K S31600**  
 ASME (1) SA193 2001 B8M (1)  
 ASTM A182 2004A S31600/03 (A)  
 ASTM A276 2004 S31600/03  
 ASTM A479 2004 S31600/03  
 NACE MR0175 2002 S31600/03

**AMS 5653 F S31603**  
 ASME (1) SA320 2001 B8M (a)  
 ASTM A182 2004C B8M  
 ASTM A314 97 S31600/03  
 ASTM A484 2003A  
 QQ-S-763 F 316/316L

(0) Chemical analysis only and mechanical properties.  
 (2) SEC.II PT.A 2001 EDITION ADD.2002  
 (4) Chemical analysis only.

Qualità: **316/316L**  
 Werkstoff- / Grade / Norme

Marca: **MVAPML MAXIVAL**  
 Markenbezeichnung / Brand / Norme

Funzionatura: **T.316/316L**  
 Kennzeichnung / Marking / Norme

Pos. nr. Pos. nr. Item nr. Nr. de poste	Oggetto Component Product description Descrip. du produit	Dimensioni - in Abmessungen Dimension Dimension	Tolleranza Toleranz Allowance Tolérance	Lunghezza - in Länge Length Longueur	Colata Schmelze Heat Coulée	Pezzi Stückzahl Pieces Pièces	Peso - LB Gewicht Weight Poids	Lotto nr. Losnr. Lot nr. Lot no.
0170	Round	6,2500	A484	157 / 196	239396		3,505	426501070

Sono state soddisfatte tutte le condizioni richieste  
 Die gestellten Anforderungen sind lt. Abgabe erfüllt  
 The material has been furnished in accordance with the requirements  
 Le matériel a été livré conforme aux exigences

Controllo antisolfatazione: OK  
 Vornachbehandlung: spezifiziert / durchgeföhrt  
 Anlaufzeit nach Sulfidation: OK  
 Corrosionsergebnisse laut: n.a.s.

Controllo visivo o dimensionale: soddisfa le esigenze  
 Sichtprüfung und Abmessung: ohne Beanstandung  
 Visual inspection and dimensional check satisfactory  
 Contrôle visuel et dimensionnel: satisfaisant

TEST	Prove / Proben Eigenschaften Long. diam. 2mm, width diam. 10mm Wich. Diam. 10mm Long. diam. 2mm mm	* F	Snervamento Dehnung Tens. elong. Rp 0,2% k.s.L.	Snervamento Yield stress Units elongation	Resistenza Tensile strength Resistance à la traction Rm k.s.L.	Resistenza Tensile strength Resistance à la traction E Ad %	Strizione Drawing Reduction of area RA %	Resilienza Resilienz Impact Value Resilience	Durezza Härte Hardness Oval HB
Valori richiesti / Anforderungen / Required values Valeurs demandées		min max	30	-	75 115	- 40	- 50	-	140 223
A	12,5	68	L	42	84	62	75		174

Grain size for ASTM E112 : 4

## Analisi chimica

Chemische Zusammensetzung / Chemical Analysis / Analyse chimique

Colata / Heat Schmelze / Coulee	min - max 0,030	1,00	1,25 2,00	15,00 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 %				
239396	0,016	0,61	1,43	17,11	2,04	0,47	10,09	0,090	0,030	0,025	0,069				

Produced without class I-II Ozone depleting substances.  
 Solution heat treated free from continuous carbide network.  
 Annealing temperature: 1960° F for 4 H/H<sub>2</sub>O.  
 Micro and macro etch test: OK  
 Intergranular corrosion test per ASTM A262,02 pract. E: ok.

Made in Italy No welding or weld repair Material free from Mercury or radio-activity contamination  
 The Quality Management System is Certified acc. Pressure Equipment Directive [97/23/EC] Annex 1,3,4.3 by TÜV and LLOYD'S

Vicenza, 11/03/05 Mod. ACC008	Il collaudatore di stabilimento / der Werkstoffverständiger / Works inspector / L'agente d'usine  M. Rizzotto	Pagina - 1 di 1
----------------------------------	---	-----------------

E12919