



QUALITY MANAGEMENT SYSTEM  
CERTIFIED BY LLOYD'S REGISTER

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

Cliente / Besteller/Purchaser/Client  
VALBRUNA U.K. LTD.  
OLDBURY ROAD  
B70 9BH-WEST BROMWICH B70 9BH GB-GB

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

Avviso di Spedizione: D-VI12029670  
Lieferanzeige/Packing list/B.L.

Ordine nr: 204039256 WEST BROMWICH  
Bestell/Your order/Commande

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

Certificato nr: MEST255849/2012/  
Prüfung/Test/Essai

Conferma ordine nr: EI12003568  
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'assesseur



Stato di fornitura: - Annealed Cold Drawn  
Lieferzustand/Delivery state/Etat de livraison

Specifiche:  
Anforderungen / Requirements / Exigences

VAL STOCK 2010 1.4404/316L A,CF  
AMS 5648 L S31600 A  
ASME SA182 2010 S31603 A (1)  
ASME SA479 2010 S31600 A (4)  
ASTM A182 2011A S31603 (7)  
ASTM A276 2010 S31603 A,CF  
ASTM A370 2011A .  
EN 10088-3 2005 1.4401 A,CF  
EN 10272 2007 1.4404 A,CF  
NACE MR0175 2009 S31600 A (8)  
QQ-S-763 F 316L A,CF

AISI 316  
AMS 5653 F S31603 A  
ASME SA276 2010 S31600 A,CF (2)  
ASME SA479 2010 S31603 A (5)  
ASTM A262 2010 PRACTICE E  
ASTM A314 2008 S31600  
ASTM A479 2011 S31600 A  
EN 10088-3 2005 1.4404 A,CF  
NACE MR0103 2007 S31600 A  
NACE MR0175 2009 S31603 A (9)

AISI 316L  
ASME SA182 2010 S31600 A (0)  
ASME SA276 2010 S31603 A,CF (3)  
ASTM A182 2011A S31600 A (6)  
ASTM A276 2010 S31600 A,CF  
ASTM A314 2008 S31603  
ASTM A479 2011 S31603 A  
EN 10272 2007 1.4401 A,CF  
NACE MR0103 2007 S31603 A  
QQ-S-763 F 316 A,CF

- (0) SEC.II PT.A 2010 EDITION ADD. 2011a  
(1) SEC.II PT.A 2010 EDITION ADD. 2011a  
(2) SEC.II PT.A 2010 EDITION ADD. 2011a  
(3) SEC.II PT.A 2010 EDITION ADD. 2011a  
(4) SEC.II PT.A 2010 EDITION ADD. 2011a  
(5) SEC.II PT.A 2010 EDITION ADD. 2011a  
(6) For products machined directly from bar refer to ASTM A479.  
(7) For products machined directly from bar refer to ASTM A479.  
(8) ANSI/NACE MR0175/ISO 15156-3, second edition 2009-10-15  
(9) ANSI/NACE MR0175/ISO 15156-3, second edition 2009-10-15

- (0) For products machined directly from bar refer to ASME SA479.  
(1) For products machined directly from bar refer to ASME SA479.  
(2) SEC.II PT.A 2010 EDITION ADD. 2011a  
(3) SEC.II PT.A 2010 EDITION ADD. 2011a  
(4) SEC.II PT.A 2010 EDITION ADD. 2011a  
(5) SEC.II PT.A 2010 EDITION ADD. 2011a  
(6) For products machined directly from bar refer to ASTM A479.  
(7) For products machined directly from bar refer to ASTM A479.  
(8) Technical circular 1:2011 Published 2011-06-14  
(9) Technical circular 1:2011 Published 2011-06-14

Qualità: 1.4401/1.4404/316/316L  
Werkstoff/Grade/Nuance

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

Tolleranza: **h11**  
Tolleranz./Allowance/Tolerance

Punzonatura: 1.4401/4/316/L  
Kennzeichnung/Marking/Marquage

Pos. nr. Pos. nr. Item nr. Nr. de poste	Oggetto Gegenstand Product description Descrip. du produit	Dimensioni - mm Abmessungen Dimension Dimension	Lunghezza - mm Länge Length Longueur	Colata Schmelze Heat Coulée	Pezzi Stückzahl Pieces Pieces	Peso - KG Gewicht Weight Poids	Lotto nr. Losnr. Lot nr. Lot nr.
0040	Hexagon	32,000	3150 / 3150	257002		994,0	130609600

### TEST ALLO STATO DI FORNITURA

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

TEST	Provetta/Probastab Specimen/Eprouvette Larg diam Spess. Breite Diam. Dicke Width Diam. Thickness Larg. diam. epais mm	°C	Posiz. Saggio Probetage Location Emplacement 1)	Snervamento Streckgrenze Yield Stress Limite elastique Rp 0,2% N/mm2	Snervamento Streckgrenze Yield Stress Limite elastique Rp 1% N/mm2	Resistenza Zugfestigkeit Tensile strength Resistance à traction Rm N/mm2	Allungamento Bruchdehnung Elongation Allongement A5 % E 4d %	Strizione Einschnürung Reduction of area Striction Z % RA %	Resilienza Kerbschlagarbeit Impact Value Resilience KV J	Durezza Haerte Hardness Durete HB
	Valori richiesti 1 Anforderungen/Required values Valeurs demandées	min max		207	235	517 900	20 30	- 50	100	140 235
A	10	20	L	452	511	647	46 48	66 66	176 180 187	223

TEST	min	max
A	Grain size for ASTM E112	5

1)L=longitudinale/längs, T=transversale/quer, Q=Tangenziale/tangential

Mechanical properties according to ASTM A370.

### Analisi chimica

Chemische Zusammensetzung/Chemical Analysis/Analyse chimique

Colata /Heat Schmelze/Coulée	min - max 0,030	1,00	1,25 2,00	16,50 18,00	2,00 2,50	- 1,00	10,00 13,00	- 0,040	- 0,030	- 0,100	-	-	-	-
	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	P %	S %	N %				
257002	0,018	0,51	1,52	16,52	2,00	0,47	10,10	0,030	0,030	0,069				

Intergranular corrosion test per ASTM A262 pract. E: ok.  
I.Korrosion nach EN ISO 3651-2A Sensibilisierung : T1 : OK  
Corrosion test per EN ISO 3651-2A sensitized T1 : OK

**FLOW TECHNOLOGY LTD**  
**TEST CERTIFICATE**  
**VERIFIED TRUE**  
**COPY OF ORIGINAL**

Vicenza, 11/10/12  
VC0008  
(Mod. MCE2)

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

M. Rizzotto

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# Acciaierie Valbruna S.p.A.



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

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OLDBURY ROAD  
B70 9BH-WEST BROMWICH B70 9BH GB-GB

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Stato di fornitura: - Annealed Cold Drawn  
Lieferzustand/Delivery state/Etat de livraison

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 à été trouvé conforme aux exigences

Controllo antimescolanza: OK  
Verwechslungsprüfung: spectralanalytisch durchgeführt  
Antimixing testing performed: OK  
Contrôle antimelange fait: r.a.s.

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Zeichen des Lieferwerkes  
Trade mark  
Sigle de l'usine produttrice



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



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

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.

Maxival 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.

**FLOW TECHNOLOGY LTD**  
**TEST CERTIFICATE**  
**VERIFIED TRUE**  
**COPY OF ORIGINAL**

Vicenza, 11/10/12

VCC008

(Mod. MCE2)

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

M. Rizzotto

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F9787 - 3/4" BSPP CS MALE X 3/4" SWIV FEMALE ADAPTOR 15K 316L