



CERTIFICATO DI COLLAUDO - ABNAHMEPRUEFZEUGNIS - INSPECTION CERTIFICATE - CERTIFICAT DE RECEPTION

In conformità a : **EN 10204 (2004) , 3.1**

Certificato nr. **MEST919001 / 2016 / 1**

Nach/According to/Selon

Prüfung/Test/Essai

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

Stato di fornitura : **Hot rolled - Annealed Cold Drawn**
 Lieferzustand
 Delivery state
 Etat de livraison

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

Ordine nr: **607050130 Sheffield**
 Bestell
 Your order
 Commande

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

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



Conferma ordine nr: **EI16007827**
 Werks/Our Order/Ref nr.

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

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

MR

Avviso di Spedizione: **D-VI16021569**
 Lieferanzeige/Packing list/B.L.

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

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

SPECIFICHE :

Note:

Anforderungen / Requirements / Exigences

Aufzeichnungen / Notes / Notes

VAL STOCK 2010 1.4404/316L A,CF
 AISI 316
 AISI 316L
 AMS 5648 L S31600 A
 AMS 5653 H S31603 A,CF
 ASME SA182 2015 S31600 A (0)
 ASME SA182 2015 S31603 A (1)
 ASME SA276 2015 S31600 A,CF (2)
 ASME SA276 2015 S31603 A,CF (3)
 ASME SA479 2015 S31600 A (4)
 ASME SA479 2015 S31603 A (5)
 ASTM A182 2015 S31600 A (6)
 ASTM A182 2015 S31603 (7)
 ASTM A262 2015 PRACTICE E
 ASTM A276 2016 S31600 A,CF
 ASTM A276 2016 S31603 A,CF
 ASTM A314 2015 S31600
 ASTM A314 2015 S31603
 ASTM A370 2015 .
 ASTM A479 2016 S31600 A
 ASTM A479 2016 S31603 A
 EN 10088-3 2014 1.4401 A,CF
 EN 10088-3 2014 1.4404 A,CF
 EN 10272 2007 1.4401 A,CF
 EN 10272 2007 1.4404 A,CF
 ISO 6892-1 2009 .
 NACE MR0103 2010 S31600 A
 NACE MR0103 2010 S31603 A
 NACE MR0175 2009 S31600 A (8)
 NACE MR0175 2009 S31603 A (9)
 QQ-S-763 F 316 A,CF
 QQ-S-763 F 316L A,CF
 MDS S01 5 316 A (A)
 ASTM A479 2016 S31600 A

- (0)SEC.II PT.A 2015 EDITION For products machined directly from bar refer to ASME SA479.
 (1)SECTION II PT.A 2015 EDITION For products machined directly from bar refer to ASME SA479.
 (2)SEC.II PT.A 2015 EDITION
 (3)SECTION II PT.A 2015 EDITION
 (4)SECTION II PT.A 2015 EDITION
 (5)SECTION II PT.A 2015 EDITION
 (6)For products machined directly from bar refer also to ASTM A479.
 (7)For products machined directly from bar refer also to ASTM A479.
 (8)ANSI/NACE MR0175/ISO 15156-3, second edition 2009-10-15 Technical circular 1:2011 Published 2011-06-14
 (9)ANSI/NACE MR0175/ISO 15156-3, second edition 2009-10-15 Technical circular 1:2011 Published 2011-06-14
 (A)Norsok-standard M-630 Edition 6, October 2013

FLOW TECHNOLOGY LTD

**TEST CERTIFICATE
 VERIFIED TRUE
 COPY OF ORIGINAL**

Tolleranza: h11 - DIN668/EN10278

Tolleranza/Allowance/Tolerance

Pos. nr. Pos. nr. Item nr. Nr. de poste	Oggetto Gegenstand Product description Descrip. du produit	Dimensioni - mm	Lunghezza - mm	Colata	Pezzi	Peso - KG	Lotto nr.
		Abmessungen Dimension Dimension	Länge Length Longueur	Schmelze Heat Coulée	Stückzahl Pieces Pieces	Gewicht Weight Poids	Losnr. Lot nr. Lot nr.
0010	Hexagon	32,000	3190/ 3190	269994		935,0	601808310

F13477 - 3/8" NPT HEX FULL COUPLING 10K 316L

Vicenza, 21/10/16

VQC005 - MEST944031

(Mod. MCE2) WSPFA0E209B33FD4288005689CECBA8D6B

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

M.Rizzotto

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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

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

TEST	Provetta/ Probestab Specimen/Eprouvette Larg.diam. Spess. Breite Diam. Dicke Width Diam. Thickness Larg. diam. epais mm	°C	Posiz. Saggio Probenlage Location Emplacement 1)	Snervamento		Resistenza	Allungamento		Strizione		Resilienza		Durezza	
				Streckgrenze Yield Stress Limite elastique Rp 0,2%	Streckgrenze Yield Stress Limite elastique Rp 1%	Zugfestigkeit Tensile strength Resistance à traction Rm	Bruchdehnung Elongation Allongement A5	E 4d	Einschnürung Reduction of area Striction Z	RA	Kerbschlagarbeit Impact Value Resilience KV	J	Haerte Hardness Durete HB	
Valori richiesti Anforderungen/Required values Valeurs demandées		min		207	235	517	20	35	-	50	100	140		
		max				900						235		
A	10	20	L	492	586	659	43	45	68	68	200	197	176	232

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	min	max
A Grain size for ASTM E112		5

Mechanical properties according to ASTM A370.
 Tensile testing according to EN ISO 6892-1

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 %					
269994	0,015	0,55	1,52	16,67	2,05	0,43	10,09	0,029	0,025	0,061					

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

Corrosion test in 16% sulfuric acid and copper sulfate solutions

Test standard: UNI EN ISO 3651-2 Method A

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	Sensitized T1	20	boil	90	5	Absence of cracks	SATISFACTORY

Reduction ratio = 34,7 : 1
 Solution annealed 1070°C for 1 h / water

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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 a été trouvé conforme aux exigences

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

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.

QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER ACCORDING TO ISO 9001 : 2008, ISO/TS16949 : 2009, AS 9100C

The Quality Management System is Certified acc. Pressure Equipment Directive "[97/23/EC]" Annex 1,s.,4.3 and 2014/68/EU 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.

Vicenza, 21/10/16

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