



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

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

Certificato nr. **MEST904371 / 2016 /**
 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 Descaled Annealed Hot**
 Lieferzustand **rolled**
 Delivery state
 Etat de livraison

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

Ordine nr: **606049906 STOCK**
 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: **EI16006238**
 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-VI16018780**
 Lieferanzeige/Packing list/B.L.

Marca: **APML**
 Markenbezeichnung
 Brand / Nuance

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

SPECIFICHE :

Anforderungen / Requirements / Exigences

Note:

Aufzeichnungen / Notes / Notes

VAL STOCK 2010 1.4404/316L A
 MDS S01 5 316 A (0)
 AISI 316

(0)Norsok-standard M-630 Edition 6, October 2013

AISI 316L

ASME SA182 2015 S31600 A (1)
 ASME SA182 2015 S31603 A (2)

(1)SEC.II PT.A 2015 EDITION For products machined directly from bar refer to ASME SA479.

(2)SECTION II PT.A 2015 EDITION For products machined directly from bar refer to ASME SA479.

ASME SA193 2015 B8M CLASS1 (3)
 ASME SA276 2015 S31600 A (4)
 ASME SA276 2015 S31603 A (5)

(3)SECTION II PT.A 2015 EDITION

(4)SECTION II PT.A 2015 EDITION

(5)SECTION II PT.A 2015 EDITION

ASME SA320 2015 B8M CLASS1 (6)
 ASME SA479 2015 S31600 A (7)
 ASME SA479 2015 S31603 A (8)

(6)SECTION II PT.A 2015 EDITION

(7)SECTION II PT.A 2015 EDITION

(8)SECTION II PT.A 2015 EDITION

ASTM A182 2015 S31600 A (9)
 ASTM A182 2015 S31603 (A)
 ASTM A193 2016 B8M CLASS1

(9)For products machined directly from bar refer also to ASTM A479.

(A)For products machined directly from bar refer also to ASTM A479.

ASTM A262 2015 PRACTICE E
 ASTM A276 2016 S31600 A
 ASTM A276 2016 S31603 A

ASTM A314 2015 S31600
 ASTM A320 2015A B8M CLASS1
 ASTM A370 2015 .

ASTM A479 2016 S31600 A
 ASTM A479 2016 S31603 A
 DIN 17440 96 1.4401 A

DIN 17440 96 1.4404 A
 EN 10088-3 2014 1.4401 A
 EN 10088-3 2014 1.4404 A

EN 10272 2007 1.4401 A
 EN 10272 2007 1.4404 A
 ISO 6892-1 2009 .

NACE MR0103 2010 S31600 A
 NACE MR0103 2010 S31603 A
 NACE MR0175 2009 S31600 A (B)

(B)ANSI/NACE MR0175/ISO 15156-3, second edition 2009-10-15 Technical circular 1:2011 Published 2011-06-14

NACE MR0175 2009 S31603 A (C)

(C)ANSI/NACE MR0175/ISO 15156-3, second edition 2009-10-15 Technical circular 1:2011 Published 2011-06-14

FLOW TECHNOLOGY LTD
TEST CERTIFICATE
VERIFIED TRUE
COPY OF ORIGINAL

Tolleranza: Tol. DIN 1017

Tolleranza/Allowance/Tolerance

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.
0010	Flat	50,000 x 20,000	6000/ 6210	270545		1176,0	614403970

F14151
3/8" MP FEM EQ TEE 30K 316L

Vicenza, 19/07/16

VQC008 - MEST904371

(Mod. MCE2) WSP34A879C289584C728989C2A2AB8D7C4

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

M.Rizzotto

Pagina - 1 di 3



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

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

Certificato nr. **MEST904371 / 2016 /**

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 Descaled Annealed Hot rolled**
 Lieferzustand
 Delivery state
 Etat de livraison

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

Ordine nr: **606049906 STOCK**
 Bestell
 Your order
 Commande

Tipi 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: **EI16006238**
 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-VI16018780**
 Lieferanzeige/Packing list/B.L.

Marca: **APML**
 Markenbezeichnung
 Brand / Nuance

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

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 Probestage Location Emplacement 1)	Snervamento		Resistenza	Allungamento		Strizione		Resilienza			Durezza	
				Streckgrenze Yield Stress Limite elastique Rp 0,2% N/mm2	Streckgrenze Yield Stress Limite elastique Rp 1% N/mm2	Zugfestigkeit Tensile strength Resistance à traction Rm N/mm2	Bruchdehnung Elongation Allongement A5 %	E 4d %	Z %	RA %	KV J	J	HB		
Valori richiesti		min		205	240	515	40	40	-	50	100			-	
Anforderungen/Required values Valeurs demandées		max				690								215	
A	10	20	L	315	361	639	50	54	73	73	249	241	240	186	

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		6

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	2,00	16,50 18,00	2,00 2,50	10,00 13,00	0,045	0,030	0,100	-	-	-	-	-
	C %	Si %	Mn %	Cr %	Mo %	Ni %	P %	S %	N %						
270545	0,015	0,49	1,27	16,80	2,00	10,00	0,032	0,028	0,074						

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 = 32,4 : 1
 Solution annealing by process annealing 1040° C min /
 / cooling water.

Vicenza, 19/07/16

VCQ008 - MEST904371

(Mod. MCE2) WSP34A879C5289984C728688C2A2AB8DF7C4

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

M. Rizzotto

Pagina - 2 di 3



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

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

Certificato nr. **MEST904371 / 2016 /**

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 Descaled Annealed Hot**
 Lieferzustand **rolled**
 Delivery state
 Etat de livraison

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

Ordine nr: **606049906 STOCK**
 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: **EI16006238**
 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-VI16018780**
 Lieferanzeige/Packing list/B.L.

Marca: **APML**
 Markenbezeichnung
 Brand / Nuance

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

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 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, 19/07/16

VCQ008 - MEST904371

(Mod. MCE2) WSP34A879C828984C728688BC2A2AB80F7C4

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

M.Rizzotto

Pagina - 3 di 3