

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

Cliente / Besteller/Purchaser/Client  
)

Avviso di Spedizione: D-VI13007993  
Lieferanzeige/Packing list/B.L.

Certificato nr: MEST318844/2013/  
Prüfung/Test/Essai

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

Ordine nr: 210040668 ZAPP 7511003182  
Bestell/Your order/Commande

Conferma ordine nr: E112008289  
Werks/Our Order/Rel. nr.

Stato di fornitura: Descaled Annealed Hot rolled  
Lieferzustand/Delivery state/Etat de livraison

Tipo di Elaborazione: E+AOO  
Erschmeltzungsart/Melting process/Mode d'elaboration

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



Specifiche:  
Anforderungen / Requirements / Exigences

VAL STOCK 2010 1.4404/316L A  
ASME SA182 2010 S31600 A (0)  
ASME SA276 2010 S31600 A (3)  
ASME SA479 2010 S31600 A (6)  
ASTM A182 2011A S31603 (9)  
ASTM A276 2010 S31600 A  
ASTM A320 2011A B8M CLASS1  
DIN 17440 96 1.4401 A  
EN 10088-3 2005 1.4404 A  
NACE MR0103 2010 S31600 A  
NACE MR0175 2009 S31603 A (B)

AISI 316  
ASME SA182 2010 S31603 A (1)  
ASME SA276 2010 S31603 A (4)  
ASME SA479 2010 S31603 A (7)  
ASTM A193 2011A B8M CLASS1  
ASTM A276 2010 S31603 A  
ASTM A479 2012 S31600 A  
DIN 17440 96 1.4404 A  
EN 10272 2007 1.4401 A  
NACE MR0103 2010 S31603 A

AISI 316L  
ASME SA193 2010 B8M CLASS1 (2)  
ASME SA320 2010 B8M CLASS1 (5)  
ASTM A182 2011A S31600 A (8)  
ASTM A262 2010 PRACTICE E  
ASTM A314 2008 S31600  
ASTM A479 2012 S31603 A  
EN 10088-3 2005 1.4401 A  
EN 10272 2007 1.4404 A  
NACE MR0175 2009 S31600 A (A)

- (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) SEC.II PT.A 2010 EDITION ADD. 2011a  
(7) SEC.II PT.A 2010 EDITION ADD. 2011a  
(8) For products machined directly from bar refer to ASTM A479.  
(A) ANSI/NACE MR0175/ISO 15156-3, second edition 2009-10-15  
(B) 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) SEC.II PT.A 2010 EDITION ADD. 2011a  
(7) SEC.II PT.A 2010 EDITION ADD. 2011a  
(8) For products machined directly from bar refer to ASTM A479.  
(A) Technical circular 1:2011 Published 2011-06-14  
(B) Technical circular 1:2011 Published 2011-06-14

FLOW TECHNOLOGY LTD  
TEST CERTIFICATE  
VERIFIED TRUE  
COPY OF ORIGINAL

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

Marca: APLM  
Markenbezeichnung  
Brand/Nuance

Tolleranza: EN 10058  
Toleranz./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 Pièces	Peso - KG Gewicht Weight Poids	Lotto nr. Losnr. Lot nr. Lot nr.
0010	Flat	40,000 x 27,000	5000 / 6000	259193		6950,0	229104130

### TEST ALLO STATO DI FORNITURA

Test on delivery condition Prüfung auf lieferbarem Produkt test à l'état de fourniture Prueba sobre el material así como entregado

TEST	Provetta/Probes Specimen/Lern.verte Lang diam. Saues Brenn Diam. Dose Weld Diam. Thickness Lang diam. saues mm	°C	Posiz. Saggio Lage Position	Snervamento Streckgrenze Yield Stress Limite elastic Rp 0,2% N/mm2	Snervamento Streckgrenze Yield Stress Limite elastic Rp 1% N/mm2	Resistenza Zugfestigkeit Tensile strength Resistance à traction Rm N/mm2	Allungamento Bruchdehnung Elongation Allongement		Strizione Einschnürung Reduction of area Striction		Resilienza Kerbschlagarbeit Impact Value Resilience KV J	Durezza Härte Hardness Dureté HB		
							A5 %	E 4d %	Z %	RA %				
Valori richiesti / Anforderungen/Required values Valeurs demandées:		min		205	240	515	40	40	-	50	100	-		
		max				690						215		
A	10	20	L	319	361	621	52	55	74	74	244	245	238	183
B	10	20	L	306	358	621	52	55	74	74	242	241	237	186

TEST	min	max
B	Grain size for ASTM E112	5

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

### 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 %						
259193	0,018	0,56	1,27	16,83	2,00	10,00	0,028	0,024	0,073						

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

Vicenza, 11/03/13 VCO006 (Mod. MCE2)	Il collaudatore di stabilimento / der Werkssachverständige / Works inspector / L'agent d'usine M. Rizzotto	Pagina - 1 di 2
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F9493 - 1/4" NPT F/F/F FXD TEE 10K 316L