

Acciaierie Valbruna S.p.A.



CERTIFICATO DI COLLAUDO
ABNAHMEPRUEFZEUGNIS
INSPECTION CERTIFICATE
CERTIFICAT DE RECEPTION
EN 10204 (2005) , 3.1

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

Cliente / Besteller/Purchase Client
VALBRUNA CANADA LTD
 8724 HOLLGATE CRESCENT
 CDN-MILTON, ONT L5T 5Z1-CAN

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

Avviso di Spedizione: D-VI08027217
 Lieferantigo/Packing list/S.L.

Ordine nr: 810002044 STOCK - CANADA
 Bestell/Your order/Commande

Certificato nr: MEST682312/2008/
 Prüfung/Test/Essai

Conferma ordine nr: EI08011280
 Werks/Our Order/Ref. nr.

Marchio di Fabbrica:
 Zeichen des Lieferwerkes
 Trade mark
 Sigle de l'usine producteur



Punzone del Collaudatore:
 Stempel des Werkstachverständigen
 Inspector's stamp/Pointon de l'essayeur



Oggetto Provs: Polished Annealed Peeled
 Prüfgegenstand/Item inspected/Finissage

Tipo di Elaborazione: F-AOD
 Erhebungsart/Measuring process/Mode d'elaboration

247788

Specifiche:
 Anforderungen / Requirements / Exigences

VAL CANADA 2 316/316L A
 ASME SA182 2007 S31600/03 0
 ASME SA479 2007 S31600/03 3
 ASTM A262 2002A PRACTICE E
 ASTM A320 2008 B8M
 NACE MR0175* 2003 S31600/03 5
 (0) SEC.II PT.A 2007 EDITION
 (1) SEC.II PT.A 2007 EDITION
 (3) SEC.II PT.A 2007 EDITION
 (5) * ISO 15156-3

AMS 5648 K S31600
 ASME SA193 2007 B8M 1
 ASTM A182 2008A S31600/03 4
 ASTM A276 2008 S31600/03
 ASTM A479 2006A S31600/03
 QQ-S-763 F 316/316L

AMS 5653 F S31603
 ASME SA320 2007 B8M (2)
 ASTM A193 2008A B8M
 ASTM A314 97 S31600/03
 MIL-S-862 B/1 316/316L

0Chemical analysis only.
 2SEC.II PT.A 2007 EDITION
 4Chemical analysis only.

Qualità: T-316L
 Werkstoff/Grade/Usine

Marca: MVAPML MAXIVAL
 Markenbezeichnung/Brand/Usine

Punzonatura: 316/316L
 Kennzeichnung/Marking/Marquage

| Pos. nr. Pos. nr. N. de poste | Oggetto Gegenstand Product description Descr. du produit | Dimensioni - In Abmessungen Dimension Dimension | Tolleranza Tolerance Allowance Tolerance | Lunghezza - In Länge Length Longueur | Colata Schmelze Heat Coulée | Pezzi Stückzahl Pieces Pièces | Peso - LB Gewicht Weight Poids | Lotto nr. Losnr. Lot nr. Lot nr. |
|-------------------------------------|---|--|---|---|--------------------------------------|--|---|---|
| 0030 | Round | 2,1250 | 484-06B | 150 / 154 | 247788 | | 2.811 | 807401241 |

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

Controllo antimiscelazione: OK
 Verwechslungsprüfung: spezialanalytisch durchgeführt
 Antimixing testing performed: OK
 Contrôle antimélange fait: r.a.s.

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

| TEST | Provetta/Probes Spezialprüfprobe Lap. diam. Spec. Ersch. Diam. Dicke Werk. Diam. Thickness Lap. diam. épais mm | °F | Posiz. Saggio Lage Position 1) | Snervamento Streckgrenze Yield Stress Rp 0,2% k.s.i. | Snervamento Streckgrenze Yield Stress Limite élastique | Resistenza Zugfestigkeit Tensile strength Resistance à traction Rm k.s.i. | Allungamento Dehnung Elongation Allongement E 4d % | Strizione Zugsenkung Reduction of area Striction RA % | Resilienza Herschlagwert Impact Value Resilience | Durezza Härte Hardness Dureté HB g |
|---|--|------------|---|--|---|--|---|--|---|---|
| Valori richiesti 1 Anforderungen/Required values Valeurs requises | | min max | | 30 | - | 75 115 | - 40 | - 50 | - | 140 223 |
| A | 12,5 | 68 | L | 49 | | 92 | 56 | 67 | | 182 |

Grain size for ASTM E112 : 6

1) L=longitudinale/Längs, O=transversale/quer, T=Tangenziale/tangentiel

Analisi chimica

Chemische Zusammensetzung/Chemical Analysis/Analyse chimique

| Colata / Heat Schmelze/Coulée | min - max 0,030 | 1,00 | 1,25 2,00 | 16,00 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 % | - | - |
| 247788 | 0,013 | 0,60 | 1,51 | 16,77 | 2,00 | 0,64 | 10,15 | 0,090 | 0,029 | 0,030 | 0,061 | | |

Produced without class I-II Ozone depleting substances.

Solution heat treated free from continuous carbide network.

Annealing temperature: 1940°F for 1,5 h/water.

Micro and macro etch test: OK

Intergranular corrosion test per ASTM A262 pract. E: ok.

Material is DFARS Compliant

Melted and manufactured 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, s. 4.3 by TUEV and LLOYD'S

Vicenza, 15/10/08
 VCO008
 (Mod. MCER)

Il collaudatore di stabilimento / der Werkstachverständige / Works inspector / L'agent d'usine
 M. Rizzotto

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