



Viale De Gasperi, 194
20010 MARCALLO Con CASONE (MI) - Italia
Tel. 02/976300.1 - Fax 02/976300252

Marcallo (MI), 05/10/2012

DESMET BALLESTRA S.p.A.
Via Piero Portaluppi, 17
20138 - MILANO

Uff. Collaudi

OGGETTO /Subject:

- **TRASMISSIONE CERTIFICATI di analisi chimica e prove meccaniche**
- Test certificates transmittal

Vi inviamo in allegato la certificazione relativa al seguente ordine:

Please find here attached material test certificates for the above mentioned P.Order:

Type EN 10204:2005 3.1
Prot. N. 00009323
Ns. Rif. 00003474
Vs. Rif. 121868 - 08.08.2012
C2F11A

*DISTINTI SALUTI
Best regards*



Viale De Gasperi, 194
20010 MARCALLO Con CASONE (MI) - Italia
Tel. 02/976300.1 - Fax 02/976300252

Marcallo (MI), 08/10/2012

DESMET BALLESTRA S.p.A.
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OGGETTO /Subject:

- **TRASMISSIONE CERTIFICATI di analisi chimica e prove meccaniche**
- Test certificates transmittal

Vi inviamo in allegato la certificazione relativa al seguente ordine:
Please find here attached material test certificates for the above mentioned P.Order:

Type EN 10204:2005 3.1
Prot. N. 00009349
Ns. Rif. 00003474
Vs. Rif. 121868 - 08.08.2012
C2F11A

*DISTINTI SALUTI
Best regards*

N. 00009323
PAG. N. Sheet N. 1 / 1
DATA Date 05/10/2012

ALLEGATO RIASSUNTIVO

Summary of test certificates

Cliente Customer: DESMET BALLESTRA S.p.A.

Commessa Job N. 00003474

Ordine N. P.O. number: 121868 - 08.08.2012
C2F11A

| Pos. Item | Descrizione Description | Q.ta' Q.ty | N° Colata o Marcatura Heat N° or PCS. Marking | Pz. Immagine Image |
|--------------|----------------------------|---------------|--|---|
| 007 | 33.40x3.38 (P03.009.41) | 12,00 | 804479 | CTCERT201100151488_ 1 |
| 008 | 60.33x3.91 (P03.009.52) | 16,36 | 45208 | CTCERT201200154469_ 1 CTCERT201200154469_ 2 CTCERT201200154469_ 3 |

N. 00009349
PAG. N. Sheet N. 1 / 1
DATA Date 08/10/2012

ALLEGATO RIASSUNTIVO

Summary of test certificates

Cliente Customer: DESMET BALLESTRA S.p.A.

Commessa Job N. 00003474

Ordine N. P.O. number: 121868 - 08.08.2012
C2F11A

| Pos. Item | Descrizione Description | Q.ta' Q.ty | N° Colata o Marcatura Heat N° or PCS. Marking | Pz. Immagine Image |
|--------------|--|---------------|--|-----------------------|
| 001 | CURVE 90° LR 1" SCH.40/S (P03.002.34) | 1,00 | 105342 | CT04L#20124###1053_ 1 |
| 002 | CURVE 90° LR 2" SCH.40/S (P03.002.42) | 2,00 | 119162 | CT16L#20126###1191_ 1 |
| 003 | CURVE 90° LR 6" SCH.5/S W (P03.002.60) | 2,00 | TP5583 | CTCERT201100150292_ 1 |
| 004 | 1" SCH.40/S (P03.007.76) | 2,00 | X3H7 | CTCERT201200157066_ 1 |
| 005 | 2" SCH.40/S (P03.007.85) | 1,00 | 09A1485 | CTCERT201000144338_ 1 |
| 005 | 2" SCH.40/S (P03.007.85) | 1,00 | 407700 | CTCERT201200157067_ 1 |
| 006 | 4" SCH.5/S (P03.007.88) | 1,00 | QM659 | CTCERT201200157290_ 1 |
| 009 | RID. CONC. 8"x6" SCH.5/S (P03.011.44) | 1,00 | 015649 | CT04L#20094###0156_ 1 |

Certificato di collaudo d'officina tipo: EN 10204 3.1
 Product test certificate Type: EN 10204 3.1
 Certificat de Réception Type: EN 10204 3.1



Stab. / Plant: Via Don Spagnoli 15 - 29010 Sarmato (PC) - ITALIA
 tel. (+39) 0523 887452-887891 - fax. (+39) 0523 887687

Sede Operativa / Commercial Office:
 RACCONTUBI S.p.A. - Viale De Gasperi, 194
 20010 - Marcallo con Casone (MI) - ITALIA
 tel. (+39) 02 90376337 - info@raccortubi.it

Quality System
 Certified

Cliente RACCONTUBI S.p.A.

Ordine N. OS0000020 S DEL 01/02/2012
 P.O.N./Commande N.

| | | |
|----------------|-------------|------------|
| Pos. N. | Q.tà | 380 |
| Item/Poste | Qty/Q.té | |

Certificato di collaudo d'officina tipo: EN 10204 3.1

Product test certificate Type: EN 10204 3.1
 Certificat de Réception Type: EN 10204 3.1

Date: 11/04/12

Date:

Descrizione Description
 ELBOWS 90° LR 2" SCH.40/S

Specifiche Specification
 FITTINGS TO ASTM A403/403M-11
 ASME SA403/SA403M ed 10 WP 316/316L
 DIMS/ENDS ANSI ASME B16.9 ed 2007

| Costruzione/Manufacture/Méthode de fabrication | |
|---|---|
| Formato a freddo | Senza saldatura |
| <i>Cold formed</i> | <i>Seamless</i> |
| <i>Formés à froid</i> | <i>Sans soudure</i> |
| Ispezione/Inspection/Inspection | |
| — | Esame visivo e dimensionale: Buono |
| — | <i>Visual and dimensional test: Satisfactory</i> |
| — | <i>Examen visuel et dimensionnel: Satisfaisant</i> |
| — | Identificazione materiale: Buono |
| — | <i>Positive Material Identification: Satisfactory</i> |
| — | <i>Analyse de contrôle du produit: Satisfaisant</i> |

| Materiale base/Raw material/Matiel du départ | | | | | | | | | |
|--|--|--|---|--|---|--|--------------------------------------|--|--|
| Fabbricante/Manufacturer/Fabriquant: SCHOELLER BLECKMANN Cert. No.: 524598 | | | | | | | | | |
| Caratteristiche meccaniche | | | | | | | | | |
| Mechanical Properties/Caractéristiques Mécaniques | | | | | | | | | |
| Specifiche/Specification | Colata N. Heat N. Coulée N. | N. prova Specimen N. Échantil. N. | Snervamento Yield strength Tensile strength Limit d'élasticité N/mm ² | Rottura Elongation Resistancé à la traction N/mm ² | Allungam. Elongement Allongement | % Hardness as per NACE MR01-75 | Durezza Hardness Dureté | Resilienza Impact energy Resilience Joules | Resilienza Impact energy Resilience Joules |
| SMLS PIPES TO ASME/ASTM SA1312TP 316/316L, DIMS TO ANSI B36.9 | 44016 | 30000031819 | 306 | 560 | 43 | HRC<22 | | | |
| | | | | | | | | | |
| Analisi chimica %/Chemical composition/Composition chimique | | | | | | | | | |
| Colata N. Heat N. Coulée N. | C | Si | Mn | P | S | Cr | Ni | Mo | N |
| 44016 | 0,012 | 0,3 | 1,48 | 0,024 | 0,001 | 16,90 | 11,30 | 2,14 | 0,066 |
| | | | | | | | | | |
| Prove/Test/Tests | | | | | | | | | |
| Prova di corrosione A262 Prat. E: Conforme | | | | | | | | | |
| Corrosion Test A262 Pract. E: In conformity | | | | | | | | | |
| Essais de corrosion A262 Prat. E: En Conformité | | | | | | | | | |
| Note/Remarks/Notes | | | | | | | | | |
| I dati dall'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove. The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests. L'analyse chimique et les caractéristiques mécaniques sont en conformité au certificat émis par le producteur du matériel de base et/ou par le laboratoire qui a effectué les tests. | | | | | | | | | |
| Responsabile Controllo Qualità <i>[Signature]</i> | | | | | | | | | |
| Quality Control Manager | | | | | | | | | |
| (*) Material marked with certificate number as per relevant code. | | | | | | | | | |

Customer: DESMET BALLESTRA S.p.A.

Order : 121868 - 08.08.2012 Project: C2F11A

Descr. : CURVE 90° LR 2" SCH.40/S (P03.002.42)

Heat n° or Pcs. marking : 119162 Qtà/Qty:2 Posiz./Item n.: 002

Protocollo : CTCERC201200009349 * CERTIFIED TRUE COPY * Issued 08/10/12



INSPECTION CERTIFICATE EN 10204 3.1

150292

1 (6)

This inspection certificate fulfills the requirements of EN 10204 3.1

| CUSTOMER RACCORDUBI S.P.A. VIALE DE GASPERI 194 20010 MARCALLO CON CASONE Italy | DATE 13.7.2011 / 3.8.2011 | CERTIFICATE NO 00027169 A A | | |
|---|------------------------------|---|--------|--------------------|
| | DELIVERY NO 80038710 | SHIPPING POINT OSTP Jakobstad shipping | | |
| CERTIFICATE TEXT | | | | |
| | | | | |
| ITEM | MATERIAL NO | DESCRIPTION | BATCH | DELIVERED QUANTITY |
| Your reference: OS000142S | | Our order: 300143955 | | |
| 000010 | 6014092 | Elbow 45° LR 168,3x2,77 6" 5S R=229 EN 1.4307/304L OT226 ASTM A403 WP-W | LK8099 | 10 PC |
| 000020 | 6014011 | Elbow 90° LR 168,3x2,77 6" 5S R=229 EN 1.4307/304L OT226 ASTM A403 WP-W | TP5582 | 100 PC |
| 000030 | 6014013 | Elbow 90° LR 219,1x2,77 8" 5S R=305 EN 1.4307/304L OT226 ASTM A403 WP-W | TP5394 | 50 PC |
| 000040 | 6014026 | Elbow 90° LR 168,3x2,77 6" 5S R=229 EN 1.4404/316L OT226 ASTM A403 WP-W | TP5583 | 100 PC |
| 000050 | 6014032 | Elbow 90° LR 323,9x3,96 12" 5S R=457 EN 1.4404/316L OT226 ASTM A403 WP-W | TI4078 | 20 PC |

OUTOKUMPU STAINLESS TUBULAR PRODUCTS
Nordanvägen 11
68601 Jakobstad

Telephone +358 6 786 5111
Telefax +358 6 786 5222

www.outokumpu.com

Customer: DESMET BALLESTRA S.p.A.
Order : 121868 - 08.08.2012 Project: C2F11A
Descr. : CURVE 90° LR 6" SCH.5/S W (P03.002.60)
Heat n° or Pcs. marking : TP5583 Qtà/Qty:2 Posiz./Item n.: 003
Protocollo : CTCERC201200009349 * CERTIFIED TRUE COPY * Issued 08/10/12

Product description

Elbow bent from pipe, 90°, longradius

Technical requirements

ASTM A 403-10 and ASME SA 403-07
 NACE MR0175-03 Hardness max 22 HRC.
 Made from welded pipes without filler material

Product marking

OUTOKUMPU JA Dimension ASTM A/ASME SA 403 WP Material W Batch Made in

Material
 WP 316L/316
150292
Melting process
 E+AOD
Extent of deliveryDimension
6" SCH 5SBatch number
TP5583Starting material
Pipe 1.4432/316LHeat number
937442

Deliv. cond.

Chemical composition (According to inspection certificate of steel manufacturer)

| C [%] | Si [%] | Mn [%] | P [%] | S [%] | Cr [%] | Ni [%] | Mo [%] | Ti [%] | N [%] | Cu [%] |
|-------|--------|--------|-------|-------|--------|--------|--------|--------|-------|--------|
| 0,023 | 0,370 | 1,300 | 0,032 | 0,003 | 16,70 | 10,60 | 2,550 | | 0,036 | |

Test results (Test number ending with L = longitudinally and T = transversely)

| Test no. | R _{p0,2} [N/mm ²] | R _{p1,0} [N/mm ²] | R _m [N/mm ²] | A ₅ [%] | Technological tests | Heat treatment |
|----------|--|--|-------------------------------------|--------------------|---------------------|----------------|
| C3657T | 279 | 321 | 569 | 58 | | 1050°C/water |
| C3658T | 271 | 306 | 566 | 57 | | |

Eddy current test acc. to ASTM A 312 (Starting pipe) :

Accepted

Dimensional inspection ANSI B 16.9 :

Accepted

Visual inspection :

Accepted

Material identification test :

Accepted

Fittings corrosion resistant acc. to ASTM A 262 Pr. E

These components are manufactured according to
 PED 97/23/EC Annex 1, chapter 3.1, 4.3 and 7.2

ISO 9001:2008 Quality Management System, certified by TÜV.
 Certified acc. to PED 97/23/EC Annex 1, chapter 3.1, 4.3 and 7.2,
 by TÜV Notified Body reg. no. 0045.

ADM 2000 W0 by TÜV, Pipes: cert.No. 07-202-1326-WP-0562/08,
 Elbows: cert.No. 07-202-1326-WP-0575/08

The requirements are fulfilled as stipulated.

Outokumpu Stainless Tubular Products Oy Ab

P.O.Box 15, FIN-68601 JAKOBSTAD, Finland

QUALITY DEPARTMENT
Inspector Kjell Hagvik
 This test certificate is made by controlled ADP-system
 and is valid without signature.

Tel. +358 6 7865111, Fax. +358 6 7865222

Domicile: Jakobstad, Finland. Business ID: 1731312-7

Customer: DESMET BALLESTRA S.p.A.

Order : 121868 - 08.08.2012 Project: C2F11A

Descr. : CURVE 90° LR 6" SCH.5/S W (P03.002.60)

Heat n° or Pcs. marking : TP5583 Qtà/Qty:2 Posiz./Item n.: 003

Protocollo : CTCERC201200009349 * CERTIFIED TRUE COPY * Issued 08/10/12



157066

Système de Management de la Qualité
ISO 9001 certifié par LRQA
System of Quality Management
ISO 9001 LRQA Certified

① 02 48 69 74 20

✉ 02 48 69 74 29

Reg N° 9917426

ACCEPTANCE CERTIFICATE EN 10204/3.1 CERTIFICAT DE RECEPTION EN 10204/3.1

| | | |
|-------------------------------------|--------|--|
| DISPATCH NOTE # | 173761 | Certificat N° : 173761001 OUR ORDER/NOTRE CDE: 201245 |
| AVIS EXPÉDITION N° | | |
| YOUR ORDER: 5783 | | |
| CUSTOMER / CLIENT: RACCORDUBI S.P.A | | |

PRODUCT / PRODUIT

| ITEM POSTE | QTY QTE | DESCRIPTION & SIZE DESIGNATION & DIMENSION | REQUIREMENTS SPECIFICATIONS | GRADE NUANCE |
|------------|---------|---|--|--------------|
| 1 | 2 | SHORT STUB-END A 1" SCH 40S WP304/304L-S | WP304L A403 02/SA403 E02.B16-9.B16-25.MSS-SP43 ASTM A403-07 / ASME SEC.II PART A SA403-07 | 304/304L |

BASE MATERIAL / MATIERE DE BASE

| HEAT NUMBER COULEE | IDENTIFICATION IDENTIFICATION | MATERIAL SUPPLIER FOURNISSEUR | REQUIREMENTS SPECIFICATIONS | PQR QMOS-AQUAP |
|--------------------|-------------------------------|-------------------------------|-----------------------------|----------------|
| X3H7 | 11C278 | ROLDAN | ROND DIAM 50 - 304 L/1.4307 | |

CHEMICAL COMPOSITION / COMPOSITION CHIMIQUE

| HEAT COULEE | %C | %Si | %Mn | %P | %S | %Cr | %Ni | %Mo | %Ti | %Cu | %N | %Co | | | |
|-------------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|--|--|--|
| X3H7 | 0.015 | 0.417 | 1.386 | 0.029 | 0.026 | 18.050 | 8.026 | 0.343 | 0.002 | 0.320 | 0.069 | 0.170 | | | |

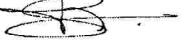
MECHANICAL CHARACTERISTICS - TESTINGS / CARACTÉRISTIQUES MÉCANIQUES - ESSAIS

| HEAT COULEE | YIELD STRENGTH LIMITÉ ELASTIQUE | | TENSILE STRENGTH RESISTANCE RUPTURE | | ELONGATION ALLONGEMENT | | HARDNESS DURETÉ | | HEAT TREATMENT HYPERTREMPE | | IC TEST CORROSION INTÉ. | | PMI TEST TEST SPECTRO | | WELDING FACTOR FACTEUR SOUDAGE | |
|-------------|------------------------------------|---------|--|---------|---------------------------|---------|--------------------|---------|-------------------------------|---------|----------------------------|--------------|--------------------------|---------|-----------------------------------|---------|
| | 0.2% Rm Mpa | | Rm Mpa | | A% | | HRC | | 1040 °C | | A262 PRACT.E | | | | Z | |
| | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT |
| X3H7 | 342 | | 634 | | 68 | | | OK | | YES | yes | Able to pass | yes | NO | | |

ADD ON TESTING(S) / TEST(S) COMPLEMENTAIRE(S)

| TESTINGS ESSAIS | REQUIREMENTS SPECIFICATIONS | ORDER REFERENCE REFERENCE COMMANDE | TEST REPORT # PV N° |
|--------------------|--------------------------------|---------------------------------------|------------------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

REMARKS / REMARQUES

| DIMENSIONAL & ASPECT / DIMENSION ET ASPECT: GOOD | | STATE OF DELIVERY / ETAT DE LIVRAISON: PICKLED AND PASSIVATED | |
|--|--|--|--|
| BRAND'S MANUFACTOR SIGLE FABRICANT: | | We Certify that delivered products comply requirements's customer. Nous certifions les produits conformes aux spécifications de la commande et de A.M du 24/03/78. Rm <= 760 MPa. A% (Lo=5.65 \So)>16.Rm (A-2) >= 10500. | |
| <i>Manufacturing according to PED 97/23/EC Annex 1 - 4.3</i> | | Chemical composition and mechanical characteristics are according to the original's Certificate. This certificate, made from data processing treatment, is applicable without signing. L'analyse chimique et les caractéristiques mécaniques sont conformes au certificat original. Ce certificat réalisé par traitement informatique est applicable sans signature. | |
| <i>Fabrication conforme PED 97/23/CE Annexe 1 - 4.3</i> | | DATE 29/08/2012 | FACTORY INSPECTOR EXPERT USINE : S.FRANIER-BIRIN  |

Customer: DESMET BALLESTRA S.p.A.

Order : 121868 - 08.08.2012 Project: C2F11A

Descr. : 1" SCH.40/S (P03.007.76)

Heat n° or Pcs. marking : X3H7 Qtà/Qty:2 Posiz./Item n.: 004

Protocollo : CTCERC201200009349 * CERTIFIED TRUE COPY * Issued 08/10/12



Reg N° 9917426

ACCEPTANCE CERTIFICATE EN 10204/3.1
CERTIFICAT DE RECEPTION EN 10204/3.1

| | |
|-------------------------------------|--|
| # N° 144541003 | DISPATCH NOTE # AVIS EXPEDITION N° 144541 |
| YOUR ORDER: 5720 | OUR ORDER/NOTRE CODE: 177210 |
| CUSTOMER / CLIENT: RACCORDUBI S.P.A | |

PRODUCT / PRODUIT

| ITEM POSTE | QTY QTE | DESCRIPTION & SIZE DESIGNATION & DIMENSION | REQUIREMENTS SPECIFICATIONS | GRADE NUANCE |
|------------|---------|---|--|--------------|
| 12 | 4 | SHORT STUB-END A 2" SCH 40S WP316/316L-S | WP316L A403 02/SA403 E04.B16-9.B16-25.MSS-SP43 ASTM A403-07 / ASME SEC.II PART A SA403-07 | 316/316L |

BASE MATERIAL / MATIERE DE BASE

| HEAT NUMBER COULEE | IDENTIFICATION IDENTIFICATION | MATERIAL SUPPLIER FOURNISSEUR | REQUIREMENTS SPECIFICATIONS | PQR QMOS-AQUAP |
|-----------------------|----------------------------------|----------------------------------|--------------------------------|-------------------|
| 09A1485 | 10B345 | ZHEJIANG TSINGSH | TUBE 2" Sch 80S 316 L-S | 1 4 4 3 3 8 - |

CHEMICAL COMPOSITION / COMPOSITION CHIMIQUE

| HEAT COULEE | %C | %Si | %Mn | %P | %S | %Cr | %Ni | %Mo | | | | | | | |
|-------------|-------|-------|-------|-------|-------|--------|--------|-------|--|--|--|--|--|--|--|
| 09A1485 | 0.016 | 0.380 | 1.060 | 0.030 | 0.002 | 16.650 | 11.160 | 2.050 | | | | | | | |

REVIEWED

MECHANICAL CHARACTERISTICS - TESTINGS / CARACTERISTIQUES MECANIQUES - ESSAIS

| HEAT COULEE | YIELD STRENGTH LIMITE ELASTIQUE | | TENSILE STRENGTH RESISTANCE RUPTURE | | ELONGATION ALLONGEMENT | | HARDNESS DURETE | | HEAT TREATMENT HYPERTREMPE | | IC TEST CORROSION INT. | | PMI TEST TEST SPECTRO | | WELDING FACTOR FACTEUR SOUDAGE | |
|-------------|------------------------------------|---------|--|---------|---------------------------|---------|--------------------|---------|-------------------------------|---------|---------------------------|--------------|--------------------------|---------|-----------------------------------|---------|
| | 0.2% Re Mpa | | Rm Mpa | | A% | | HRC | | 1040 °C | | A262 PRACT.E | | Z | | | |
| | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT |
| 09A1485 | 310 | | 484 | | 57 | | | OK | | YES | yes | Able to pass | yes | NO | | |

ADD ON TESTING(S) / TEST(S) COMPLEMENTAIRE(S)

| TESTINGS ESSAIS | REQUIREMENTS SPECIFICATIONS | ORDER REFERENCE REFERENCE COMMANDE | TEST REPORT # PV N° |
|--------------------|--------------------------------|---------------------------------------|------------------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

REMARKS / REMARQUES

| DIMENSIONAL & ASPECT / DIMENSION ET ASPECT: GOOD | STATE OF DELIVERY / ETAT DE LIVRAISON: PICKLED AND PASSIVATED |
|--|--|
| BRAND'S MANUFACTOR SIGLE FABRICANT: | We Certify that delivered products comply requirements's customer. Nous certifions les produits conformes aux spécifications de la commande et de A.M du 24/03/78. Rm <= 760 MPa. A% (Lo=5.65 \So)=16. Rm (A-2) >= 10500. |
| Manufacturing according to PED 97/23/EC Annex 1 - 4.3 | Chemical composition and mechanical characteristics are according to the original's Certificate. This certificate, made from data processing treatment, is applicable without signing. L'analyse chimique et les caractéristiques mécaniques sont conformes au certificat original. Ce certificat réalisé par traitement informatique est applicable sans signature. |
| Fabrication conforme PED 97/23/CE Annexe 1 - 4.3 | |
| | DATE 04/10/2010 FACTORY INSPECTOR EXPERT USINE Assurance Qualité |

Customer: DESMET BALLESTRA S.p.A.

Order : 121868 - 08.08.2012 Project: C2F11A

Descr. : 2" SCH.40/S (P03.007.85)

Heat n° or Pcs. marking : 09A1485 Qtà/Qty:1 Posiz./Item n.: 005

Protocollo : CTCERC201200009349 * CERTIFIED TRUE COPY * Issued 08/10/12



157067

Système de Management de la Qualité
ISO 9001 certifié par LROA
System of Quality Management
ISO 9001 LRQA Certified

① 02 48 69 74 20
② 02 48 69 74 29

Reg N° 9917426

ACCEPTANCE CERTIFICATE EN 10204/3.1 CERTIFICAT DE RECEPTION EN 10204/3.1

| | | |
|-------------------------------------|--------|--|
| DISPATCH NOTE # | 173761 | Certificat N° : 173761002 OUR ORDER/NOTRE CDE: 201245 |
| AVIS EXPÉDITION N° | | |
| YOUR ORDER: 5783 | | |
| CUSTOMER / CLIENT: RACCORDUBI S.P.A | | |

PRODUCT / PRODUIT

| ITEM POSTE | QTY QTE | DESCRIPTION & SIZE DESIGNATION & DIMENSION | REQUIREMENTS SPECIFICATIONS | GRADE NUANCE |
|------------|---------|---|--|--------------|
| 3 | 1 | SHORT STUB-END A 2" SCH 40S WP316/316L-S | WP316L A403 02/SA403 E04.B16-9.B16-25.MSS-SP43 ASTM A403-07 / ASME SEC.II PART A SA403-07 | 316/316L |

BASE MATERIAL / MATERIE DE BASE

| HEAT NUMBER COULEE | IDENTIFICATION IDENTIFICATION | MATERIAL SUPPLIER FOURNISSEUR | REQUIREMENTS SPECIFICATIONS | PQR QMOS-AQUAP |
|-----------------------|----------------------------------|----------------------------------|--------------------------------|-------------------|
| 407700 | 12A517 | SCHOELLER BLECKM | TUBE 2" Sch 80S 316 L-S/1.4404 | |

CHEMICAL COMPOSITION / COMPOSITION CHIMIQUE

| HEAT COULEE | %C | %Si | %Mn | %P | %S | %Cr | %Ni | %Mo | %N | | | | | | |
|-------------|-------|-------|-------|-------|-------|--------|--------|-------|-------|--|--|--|--|--|--|
| 407700 | 0.023 | 0.400 | 1.570 | 0.025 | 0.009 | 16.980 | 11.200 | 2.080 | 0.074 | | | | | | |

MECHANICAL CHARACTERISTICS - TESTINGS / CARACTERISTIQUES MECANIQUES - ESSAIS

| HEAT COULEE | YIELD STRENGTH LIMITE ELASTIQUE | | TENSILE STRENGTH RESISTANCE RUPTURE | | ELONGATION ALLONGEMENT | | HARDNESS DURETE | | HEAT TREATMENT HYPERTREMPE | | IC TEST CORROSION INTÉ. | | PMI TEST TEST SPECTRO | | WELDING FACTOR FACTEUR Soudage | |
|-------------|------------------------------------|---------|--|---------|---------------------------|---------|--------------------|---------|-------------------------------|---------|----------------------------|--------------|--------------------------|---------|-----------------------------------|---------|
| | 0.2% Re Mpa | | Rm Mpa | | A% | | HRC | | 1040 °C | | A262 PRACT.E | | Z | | | |
| | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT |
| 407700 | 322 | | 683 | | 48 | | | OK | | YES | yes | Able to pass | yes | NO | | |

ADD ON TESTING(S) / TEST(S) COMPLEMENTAIRE(S)

| TESTINGS ESSAIS | REQUIREMENTS SPECIFICATIONS | ORDER REFERENCE REFERENCE COMMANDE | TEST REPORT # PV N° |
|--------------------|--------------------------------|---------------------------------------|------------------------|
| | | | |
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REVIEWED

REMARKS / REMARQUES

| | | | |
|--|--|------------|---|
| DIMENSIONAL & ASPECT / DIMENSION ET ASPECT: GOOD | STATE OF DELIVERY / ETAT DE LIVRAISON: PICKLED AND PASSIVATED | | |
| BRAND'S MANUFACTOR SIGLE FABRICANT: | We Certify that delivered products comply requirements's customer. Nous certifions les produits conformes aux spécifications de la commande et de A.M du 24/03/78. Rm <= 760 MPA. A% (Lo=5.65 \So)>16.Rm (A-2) >= 10500. | | |
| Manufacturing according to PED 97/23/EC Annex 1 - 4.3 | Chemical composition and mechanical characteristics are according to the original's Certificate. This certificate, made from data processing treatment, is applicable without signing. L'analyse chimique et les caractéristiques mécaniques sont conformes au certificat original. Ce certificat réalisé par traitement informatique est applicable sans signature. | | |
| Fabrication conforme PED 97/23/CE Annexe 1 - 4.3 | DATE | 29/08/2012 | FACTORY INSPECTOR EXPERT USINE : S.FRANIER-BIRIN |

Customer: DESMET BALLESTRA S.p.A.
Order : 121868 - 08.08.2012 Project: C2F11A
Descr. : 2" SCH.40/S (P03.007.85)
Heat n° or Pcs. marking : 407700 Qtà/Qty:1 Posiz./Item n.: 005
Protocollo : CTCERC201200009349 * CERTIFIED TRUE COPY * Issued 08/10/12



18110 VASSELAY-France

① 02 48 69 74 20

✉ 02 48 69 74 29

157290

Système de Management de la Qualité
ISO 9001 certifié par LRQA
System of Quality Management
ISO 9001 LRQA Certified

Reg N° 9917426

ACCEPTANCE CERTIFICATE EN 10204/3.1 CERTIFICAT DE RECEPTION EN 10204/3.1

| | | |
|--------------------|--------|--|
| DISPATCH NOTE # | 173858 | Certificat N° : 173858001 OUR ORDER/NOTRE CDE: 201245 |
| AVIS EXPEDITION N° | | |
| YOUR ORDER: 5783 | | |

CUSTOMER / CLIENT: RACCORDUBI S.P.A

PRODUCT / PRODUIT

| ITEM POSTE | QTY QTE | DESCRIPTION & SIZE DESIGNATION & DIMENSION | REQUIREMENTS SPECIFICATIONS | GRADE NUANCE |
|------------|---------|---|---|--------------|
| 2 | 1 | SHORT STUB-END A 4" SCH 5S WP304/304L-S | WP304L ASME B16.9.B16-25.MSS-SP43 ASTM A403-07 / ASME SEC.II PART A SA403-07 | 304/304L |

BASE MATERIAL / MATIERE DE BASE

| HEAT NUMBER COULEE | IDENTIFICATION IDENTIFICATION | MATERIAL SUPPLIER FOURNISSEUR | REQUIREMENTS SPECIFICATIONS | PQR QMOS-AQUAP |
|--------------------|-------------------------------|-------------------------------|--------------------------------|----------------|
| QM659 | 12A321 | SALZGITTER MANNE | TUBE 4" Sch 40S 304 L-S/1.4307 | |

CHEMICAL COMPOSITION / COMPOSITION CHIMIQUE

| HEAT COULEE | %C | %Si | %Mn | %P | %S | %Cr | %Ni | %N | %Co | | | | | | | |
|-------------|-------|-------|-------|-------|-------|--------|--------|-------|-------|--|--|--|--|--|--|--|
| QM659 | 0.009 | 0.320 | 1.910 | 0.020 | 0.008 | 18.300 | 10.180 | 0.074 | 0.060 | | | | | | | |

MECHANICAL CHARACTERISTICS - TESTINGS / CARACTERISTIQUES MECANIQUES - ESSAIS

| HEAT COULEE | YIELD STRENGTH LIMITE ELASTIQUE | | TENSILE STRENGTH RESISTANCE RUPTURE | | ELONGATION ALLONGEMENT | | HARDNESS DURETE | | HEAT TREATMENT HYPERTREMPE | | IC TEST CORROSION INTE. | | PMI TEST TEST SPECTRO | | WELDING FACTOR FACTEUR SOUDAGE | |
|-------------|------------------------------------|---------|--|---------|---------------------------|---------|--------------------|--------------|-------------------------------|---------|----------------------------|---------|--------------------------|--------------|-----------------------------------|---------|
| | 0.2% Re Mpa | | Rm Mpa | | A% | | HRC | | 1040 °C | | A262 PRACT.E | | | | Z | |
| | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT | BASE | PRODUCT |
| QM659 | 279 | | 632 | | 51 | | | NACE MR01.75 | | OK | | YES | yes | Able to pass | yes | NO |

ADD ON TESTING(S) / TEST(S) COMPLEMENTAIRE(S)

| TESTINGS ESSAIS | REQUIREMENTS SPECIFICATIONS | ORDER REFERENCE REFERENCE COMMANDE | TEST REPORT # PV N° |
|-----------------|-----------------------------|---------------------------------------|------------------------|
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REMARKS / REMARQUES

| | | | |
|--|--|------------|---|
| DIMENSIONAL & ASPECT / DIMENSION ET ASPECT: GOOD | STATE OF DELIVERY / ETAT DE LIVRAISON: PICKLED AND PASSIVATED | | |
| BRAND'S MANUFACTOR SIGLE FABRICANT: | We Certify that delivered products comply requirements's customer. Nous certifions les produits conformes aux spécifications de la commande et de A.M du 24/03/78. Rm <= 760 MPa. A% (Lo=5.65 \So)>16. Rm (A-2) >= 10500. | | |
| Manufacturing according to PED 97/23/EC Annex 1 - 4.3 | Chemical composition and mechanical characteristics are according to the original's Certificate. This certificate, made from data processing treatment, is applicable without signing. L'analyse chimique et les caractéristiques mécaniques sont conformes au certificat original. Ce certificat réalisé par traitement informatique est applicable sans signature. | | |
| Fabrication conforme PED 97/23/CE Annexe 1 - 4.3 | DATE | 30/08/2012 | FACTORY INSPECTOR EXPERT USINE : S.FRANIER-BIRIN |

Customer: DESMET BALLESTRA S.p.A.
Order : 121868 - 08.08.2012 Project: C2F11A
Descr. : 4" SCH.5/S (P03.007.88)
Heat n° or Pcs. marking : QM659 Qtà/Qty:1 Posiz./Item n.: 006
Protocollo : CTCERC201200009349 * CERTIFIED TRUE COPY * Issued 08/10/12

Certificato di collaudo d'officina tipo: EN 10204 3.1
 Product test certificate Type: EN 10204 3.1
 Certificat de Réception Type: EN 10204 3.1



Stab. / Plant: Via Don Spagnoli 5 - 29010 Sammato (PC) - ITALIA
 tel. (+39) 0523.887452-887991 - fax. (+39) 0523.887687
 Sede Operativa / Commercial Office:
 RACCORDI S.p.A. - Viale De Gasperi, 194
 20010 - Marcallo con Casone (MI) - ITALIA
 tel. (+39) 02.976300.1 - fax. (+39) 02.90376337 - info@raccortubi.it



| Certificato di collaudo d'officina tipo: EN 10204 3.1 Product test certificate Type: EN 10204 3.1 Certificat de Réception Type: EN 10204 3.1 | | ^(*) Marcatura e cert. N. 015649 Material Marking e Cert. N. Marquage du matériel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---------------|---|--------------------------------|---------------------|--------------------------------|-------------|--------------------------|-------------|------------|---------|-------------|-------------------|---------------------|-------------------|--------------------------|--------------------------------|----------------------|--------------------------|---------------|---------------------------|--------------------------------|-------------|--------|--------|---------|---------|---------|--------|--|----|--------|--|--|---|--|
| Client RACCORDI S.p.A. Customer/Client Ordine N. 236 S DEL 05/11/07 P.O.N./Commande N. Pos. N. 19 Item/Poste Q.tà Qty/Q.té System Certified | | ^(*) Marcatura e cert. N. 015649 Material Marking e Cert. N. Marquage du matériel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Materiale base/Raw material/Matériau du départ Fabbricante/fabricant/Fabriquant: DMV Cert. N.: 00360-04 | | Costruzione/Manufacture/Méthode de fabrication Formato a freddo Cold formed Formée à froid Ispettione/Inspection/Inspection | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Specifiche/Specification | | Caratteristiche meccaniche Mechanical Properties/Caractéristiques Mécaniques | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Colata N.</th><th>N. prova</th><th>Sforzamento</th><th>Rottura</th><th>Allungam.</th><th>Durezza</th><th>Durezza</th><th>Resilienza</th></tr> <tr> <th>Heat N.</th><th>Specimen N.</th><th>Yield strength N.</th><th>Tensile strength N.</th><th>Elongation</th><th>Hardness per NACE MRO175</th><th>Hardness HB</th><th>Impact energy Joules</th></tr> <tr> <th>Coulée N.</th><th>Echantill. N.</th><th>Limite d'elasticité N/mm²</th><th>Resistance à la traction N/mm²</th><th>Allongement</th><th>MRO175</th><th>HB</th><th>Joules</th></tr> </thead> <tbody> <tr> <td>465980</td><td></td><td>241</td><td>591</td><td>48</td><td>HRC<22</td><td></td><td></td></tr> </tbody> </table> | | Colata N. | N. prova | Sforzamento | Rottura | Allungam. | Durezza | Durezza | Resilienza | Heat N. | Specimen N. | Yield strength N. | Tensile strength N. | Elongation | Hardness per NACE MRO175 | Hardness HB | Impact energy Joules | Coulée N. | Echantill. N. | Limite d'elasticité N/mm² | Resistance à la traction N/mm² | Allongement | MRO175 | HB | Joules | 465980 | | 241 | 591 | 48 | HRC<22 | | | Esame visivo e dimensionale: Buono Visual and dimensional test: Good Examen visuel et dimensionnel: Sans réclamation Identificazione materiale Positive Material Identification Analyse de contrôle du produit | |
| Colata N. | N. prova | Sforzamento | Rottura | Allungam. | Durezza | Durezza | Resilienza | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heat N. | Specimen N. | Yield strength N. | Tensile strength N. | Elongation | Hardness per NACE MRO175 | Hardness HB | Impact energy Joules | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Coulée N. | Echantill. N. | Limite d'elasticité N/mm² | Resistance à la traction N/mm² | Allongement | MRO175 | HB | Joules | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 465980 | | 241 | 591 | 48 | HRC<22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Analisi chimica %/Chemical composition/Composition chimique | | Trattamento termico Heat treatment/Traitement Thermique Solubilizzazione a 1045°C Solution Annealing at 1045°C, water quenching Hypertermépés à 1045°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Colata N.</th><th>C</th><th>Si</th><th>Mn</th><th>P</th><th>S</th><th>Cr</th><th>Ni</th><th>Mo</th></tr> <tr> <th>Heat N.</th><th>Specimen N.</th><th>Echantill. N.</th><th>Yield strength N.</th><th>Tensile strength N.</th><th>Resistance à la traction N/mm²</th><th>Elongation</th><th>Hardness per NACE MRO175</th><th>Hardness HB</th></tr> </thead> <tbody> <tr> <td>465980</td><td>0,0120</td><td>0,3400</td><td>1,5500</td><td>0,0250</td><td>0,00900</td><td>18,3600</td><td>10,1900</td><td>0,0000</td></tr> </tbody> </table> | | Colata N. | C | Si | Mn | P | S | Cr | Ni | Mo | Heat N. | Specimen N. | Echantill. N. | Yield strength N. | Tensile strength N. | Resistance à la traction N/mm² | Elongation | Hardness per NACE MRO175 | Hardness HB | 465980 | 0,0120 | 0,3400 | 1,5500 | 0,0250 | 0,00900 | 18,3600 | 10,1900 | 0,0000 | Note/Remarks/Notes <p>I dati dall'analisi chimica e delle prove meccaniche corrispondono al certificato del fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove. The chemical analysis and mechanical properties fully comply with the certificate issued by the raw material manufacturer and/or by the laboratory that carried out the tests. L'analyse chimique et les caractéristiques mécaniques sont en conformité au certificat émis par le producteur du matériel de base et/ou par le laboratoire qui a effectué les tests.</p> | | | | | | |
| Colata N. | C | Si | Mn | P | S | Cr | Ni | Mo | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heat N. | Specimen N. | Echantill. N. | Yield strength N. | Tensile strength N. | Resistance à la traction N/mm² | Elongation | Hardness per NACE MRO175 | Hardness HB | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 465980 | 0,0120 | 0,3400 | 1,5500 | 0,0250 | 0,00900 | 18,3600 | 10,1900 | 0,0000 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Prova di corrosione A262 Prat. E: Conforme Corrosion Test A262 Pract. E: In conformity Essais de corrosion A262 Prat. E: En Conformité | | Garantie characteristics (A.M. du 24.03.78) Caractéristiques garanties pour Z22CN18-10 et Z2ZND17-13 C ≤ 0,25% S ≤ 0,05% P ≤ 0,05% Rm ≤ 760 N/mm² Rm(A-2) ≤ 1050 N/mm² A% sur 5,65 ≤ 50 ≥ 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Responsabile Controllo Qualità Quality Control Manager | | Il materiale è stato fornito in conformità ai requisiti dell'ordine. The material has been furnished in accordance with purchase order requirements. Le matériel a été trouvé conforme aux exigences. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Marchio di fabbrica Trade Mark | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ^(*) Material marked with certificate number as per relevant code. | | ^(*) Material marked with certificate number as per relevant code. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Customer: DESMET BALLESTRA S.p.A.
 Order : 121868 - 08.08.2012 Project: C2F11A
 Descr. : RID. CONC. 8"x6" SCH.5/S (P03.011.44)
 Heat n° or Pcs. marking : 015649 Qtà/Qty:1 Posiz./Item n.: 009
 Protocollo : CTCERC201200009349 * CERTIFIED TRUE COPY * Issued 08/10/12

CERTIFIED MATERIAL TEST REPORT

| | | | | | | | | |
|--------------------------|---|---|-----------------------------------|--------------------------------|-------------------------------|---------------------------|------------------------------------|--|
| Messrs. | RACCORDUBI SPA | Date | Aug. 23, 2011 | | | | | |
| Note Grade | TP 304/304L | Sheet No. | SAU669 | | | | | |
| Condition | Solution Treated | Contract No. | T151T31-A | | | | | |
| Heat No. | 804479 | Packing List No. | ET4890 | | | | | |
| Size | 33.40 x 3.38 mm | Bundle No. | 52 - 53 | | | | | |
| Length | 6.000 - 6.006 mm | © SANYO SPECIAL STEEL CO., LTD. | | | | | | |
| Pieces | 108 | Quality Assurance Department Quality Certification Group 3007, Nakashima, Shikama-ku, Himeji, Japan TEL (079) 235-6029 FAX (079) 235-6227 | | | | | | |
| Net Weight | 1,622 kg | 151488 | | | | | | |
| Chemical Composition (%) | C X1000 35 Standard Cast | Si X100 100 max 16 | Mn X100 200 max 36 | P X1000 45 max 112 | S X1000 30 max 35 | Ni X100 800 1100 | Cr X100 1800 2000 1832 | |
| Mechanical Test | Type of Specimen | 0.2%Yield Strength 30 min Ksi | Tensile Strength 75 min Ksi | Elongation 35 min % | | | | |
| From Product | Standard | ASTM | 43 44 | 87 88 | 55 56 | | | |
| Result | | | | | | | | |
| Corrosion Test | (ASTM A262-E) : GOOD | | | | | | | |
| Flattening Test | GOOD | | | | | | | |
| Dimension Inspection | GOOD | | | | | | | |
| Spark Test | GOOD | | | | | | | |
| Eddy Current Test | GOOD | | | | | | | |
| Specification | ASTM A312 ASME SA312 | | | | | | | |
| Remarks | Heat Treatment : 1040°C MIN R.C SEAMLESS STAINLESS STEEL PIPES PMI is based on Spark Test ACCORDING TO EN10204 TYPE3.I HARDNESS ACC. TO NACE MR0175:GOOD ASTM A312-09 / ASME SA312 2010 PO NO. OS000050 S | | | | | | | |
| | ===== END OF REPORT ===== | | | | | | | |

We hereby certify that the material described herein has been made in accordance with the rules of the contract.

Head of Quality Certification Group

K. Hashizume

Customer: DESMET BALLESTRA S.p.A.

Order : 121868 - 08.08.2012 Project: C2F11A

Descr.: 33.40x3.38 (P03.009.41)

Heat n° or Pcs. marking : 804479 Qtà/Qty:12 Posiz./Item n.: 007

Protocollo : CTCERC201200009323 * CERTIFIED TRUE COPY * Issued 05/10/12



INSPECTION CERTIFICATE
EN 10204 3.1

| | |
|----------------|---------|
| Number: 543612 | Rev: 01 |
| Page: 1 / 3 | |

| | |
|---------------------------------|----------------------------|
| Created on: Date: 21.03.2012 | Modified on: 02.10.2012 |
|---------------------------------|----------------------------|

TTI - TUBACEX TUBOS INOXIDABLES

Registro Mercantil de Alava, Tomo 587, Folio 189, Hoja VI 2885 - N.I.F. A-01140227

Tres cruces, 8
01400 Llodio (Alava)
SPAIN

TL: +34 946719300
FAX: +34 946725062
E-MAIL: qualitytti@tubacex.es

154469

CUSTOMER DESCRIPTION

CLIENT SOLD TO
RACCORTUBI S.P.A.
VIALE DE GASPERI 194
20010 MARCALLO CON CASONE MI
ITALY

CLIENT SHIP TO
RACCORTUBI S.P.A.
VIA FRATELLI KENNEDY 59
20010 MARCALLO CON CASONE MI
ITALY

CLIENT ORDER: OS000219 S

SALES ORDER: 111189

MATERIAL: SEAML. STAINL. STEEL TUBES/PIPES,
HEAT-TREATED, PICKLED, PICKLED-PASSIVATED
GRADE: TP316-TP316L / 1.4401-1.4404
STANDARD: ASME SECT.II PART.A SA312M-2010 ED. / ASTM A312M-11
EN 10216-5 TC1
SPEC'S.: RTX-S01 REV.2 AND NACE MR0175 / ISO 15156-3 : 2009
NACE MR0103-10
TOLERANCES: ASTM A999/A999M-04A
EN ISO 1127/03.97 D3/T3
RANDOM LENGTHS 5.000/6.500 MM
PLAIN ENDS,
DIMENSIONS: 60,33 X 3,91
COLD FINISHED

| Sales Item | Client Item | Delivery No | Lot No. | Heat No | Pieces | Weight | Tot Lgth | Un Lgth |
|------------|-------------|-------------|-----------|---------|--------|----------|----------|--------------|
| 120 | | 8110014642 | 200064855 | 45240 | 89 | 2.706 KG | 490,65 M | 5000-6500 MM |
| 120 | | 8110014642 | 200064873 | 45208 | 107 | 3.244 KG | 587,48 M | 5000-6500 MM |

RAW MATERIAL

Heat Nr:

45208

45240

Method

Electric furnace+AOD

Electric furnace+AOD

REVIEWED

| CHEMICAL COMPOSITION (%) | | | *L: Ladle C:Products | | | | | | | | |
|--------------------------|-------|-----|----------------------|------|-------|-------|--------|-------|-------|------|--------|
| * | Heat | Seq | C | Mn | Si | P | S | Ni | Cr | Mo | N |
| L | 45208 | 1 | 0,014 | 1,39 | 0,460 | 0,027 | 0,0010 | 11,15 | 16,85 | 2,23 | 0,0625 |
| L | 45240 | 1 | 0,016 | 1,47 | 0,460 | 0,026 | 0,0010 | 11,25 | 16,65 | 2,33 | 0,0580 |
| C | 45208 | 2 | 0,015 | 1,39 | 0,480 | 0,027 | 0,0020 | 11,15 | 16,80 | 2,24 | 0,0635 |
| C | 45240 | 2 | 0,016 | 1,44 | 0,460 | 0,026 | 0,0010 | 11,25 | 16,70 | 2,31 | 0,0595 |



**TUBACEX TUBOS
INOXIDABLES S.A.**

INGENIERIA DE CALIDAD

Iñigo Arriola Alcibar

We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies order's requirements. This certificate is issued by a computerized system and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.

Customer: DESMET BALLESTRA S.p.A.
Order : 121868 - 08.08.2012 Project: C2F11A
Descr. : 60.33x3.91 (P03.009.52)
Heat n° or Pcs. marking : 45208 Qtà/Qty:16,36 Posiz./Item n.: 008
Protocollo : CTCERC201200009323 * CERTIFIED TRUE COPY * Issued 05/10/12



INSPECTION CERTIFICATE EN 10204 3.1

Number: 543612 Rev: 01
Page: 2 / 3

Created on: Modified on:
Date: 21.03.2012 02.10.2012

HEAT TREATMENT

SOLUT. ANNEALED 1100 °C HOLDING TIME >= 1.5 MIN / MM WATER COOLING

TENSILE TEST

| Lot No. | Sample | T °C | Rp0.2 MPa | Rp1.0 MPa | Rm MPa | A2" % | A5 % | Type |
|-----------|--------|---------|--------------|--------------|-----------|----------|---------|------|
| 200064855 | 1 | 20 | 276 | 310 | 584 | 68 | 59 | L |
| | 2 | 20 | 274 | 308 | 576 | 69 | 60 | L |
| 200064873 | 1 | 20 | 268 | 304 | 551 | 76 | 66 | L |

HARDNESS TEST

| Lot No. | Sample | HRB1 | HRB2 |
|-----------|--------|------|------|
| 200064855 | 1 | 80 | 81 |
| 200064873 | 1 | 77 | 78 |

METALURGICAL TESTS

INTERGRANULAR CORROSION TEST ACC. TO ASTM A262 PRACT. "E": SATISFACTORY

NON-DESTRUCTIVE TESTS

100 % EDDY CURRENT TEST AT EN 10246-2, GOOD.

100 % HYDROSTATIC PRESSURE TESTED AT 133 BAR, DURING 5 SEC, GOOD.

POSITIVE MATERIAL IDENTIFICATION TEST ON EACH TUBE/PIPE BY
"X-RAY-FLUORESCENCE-ANALYZER": SATISFACTORY

DIMENSIONAL CHECKING ON EACH TUBE: SATISFACTORY

VISUAL INSPECTION ON EACH TUBE: SATISFACTORY

TECHNOLOGICAL TESTS

FLARING TEST: SATISFACTORY

FLATTENING TEST: SATISFACTORY

MARKING

TUBACEX 60,33 X 3,91 ASME SA312 ASTM A312 EN 10216-5 TC1 TP316 TP316L 1.4401 1.4404 CFD CD SMLS HEAT/ PMI-AV
LOT NO/ SPAINTX2

REMARKS

NO MERCURY, MERCURY COMPOUNDS OR MERCURY BEARING INSTRUMENTS AND/OR EQUIPMENT HAVE BEEN USED ALONG MANUFACTURING AND INSPECTION PROCESS.

NO WELD REPAIR WAS PERFORMED



TUBACEX TUBOS
INOXIDABLES S.A.

INGENIERIA DE CALIDAD

Iñigo Arriola Alcibar

We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies orders requirements. This certificate is issued by a computerized system and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.

Customer: DESMET BALLESTRA S.p.A.
Order : 121868 - 08.08.2012 Project: C2F11A
Descr. : 60.33x3.91 (P03.009.52)
Heat n° or Pcs. marking : 45208 Qtà/Qty:16,36 Posiz./Item n.: 008
Protocollo : CTCERC201200009323 * CERTIFIED TRUE COPY * Issued 05/10/12



INSPECTION CERTIFICATE
EN 10204 3.1

Number: 543612 Rev: 01
Page: 3 / 3

Created on: Modified on:
Date: 21.03.2012 02.10.2012

REMARKS

MATERIAL MANUFACTURER APPROVED BY TÜV SÜD Industrie Service GmbH (NOTIFIED BODY 036) TO ISSUE CERTIFICATES OF SPECIFIC PRODUCT CONTROL IN ACCORDING TO PRESSURE EQUIPMENT DIRECTIVE 97/23/EC ANNEX I POINT 4.3.

MATERIAL CHARACTERISTICS COMPLY WITH POINT 7.5 OF ANNEX I TO PED BY HAVING AN ELONGATION AFTER RUPTURE AT TENSILE TEST NO LESS THAN 14% AND A BENDING RUPTURE ENERGY AT IMPACT TEST NO LESS THAN 27J AT 20°C.

MATERIAL IS FREE OF RADIATION CONTAMINATION



We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies order's requirements. This certificate is issued by a computerized system and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.

**TUBACEX TUBOS
INOXIDABLES S.A.**

INGENIERIA DE CALIDAD

Ignacio Arriola Alcibar

Customer: DESMET BALLESTRA S.p.A.
Order : 121868 - 08.08.2012 Project: C2F11A
Descr. : 60.33x3.91 (P03.009.52)
Heat n° or Pcs. marking : 45208 Qtà/Qty:16,36 Posiz./Item n.: 008
Protocollo : CTCERC201200009323 * CERTIFIED TRUE COPY * Issued 05/10/12