

Hot rolled steel plates, sheets and coils

Inspection documents

In this data sheet the European inspection documents based on EN 10204:2004 are presented. The so called Analysis Certificate as well as the Mill Sheet and Test Certificate for shipbuilding steels are also reviewed. Additionally, Ruukki's inspection document practices and the dispatch of documents to customers are described.

Types of Inspection documents

- Declaration of compliance with the order 2.1 - EN 10204:2004
- Test report 2.2 - EN 10204:2004
- Inspection certificate 3.1 - EN 10204:2004
- Inspection certificate 3.2 - EN 10204:2004

Ruukki is a metal expert you can rely on all the way, whenever you need metal based materials, components, systems or total solutions. We constantly develop our product range and operating models to match your needs.

The European inspection documents for deliveries of steel products are defined in EN 10204:2004 Metallic products, Types of inspection documents. The previous version of this standard was published in 1991. In addition to the type of inspection documents the new standard defines the provider of the documents i.e. validator, and the basis of the documents, that is, whether the documents are based on non-specific or specific inspection.

The scope of the test reports is based on test units. A test unit may contain steel from one charge only. Mechanical properties testing is carried out on each test unit, e.g. each 40 tonnes rolled from a charge. The size of a test unit may vary with the type of steel or order. At its smallest a test unit may comprise one heavy plate or one coil.

In this data sheet the European inspection documents based on EN 10204:2004 are presented. The so called Analysis Certificate as well as the Mill Sheet and Test Certificate for shipbuilding steels are also reviewed. Additionally, Ruukki's inspection document practices and the dispatch of documents to customers are described.

- **Types of inspection documents**

EN 10204:2004 divides inspection documents into two main classes:

Non-specific inspection documents are the declaration of compliance with the order 2.1 and the test report 2.2.

Specific inspection documents are the inspection certificate 3.1 and inspection certificate 3.2. These two inspection certificates differ from each other in who verifies that the product is in accordance with the order and in who signs the inspection document.

- **Declaration of compliance with the order**

- **2.1 - EN 10204:2004**

With the type 2.1, declaration of compliance with the order, document the steel works declares that the products are in accordance with the order. In this, the charge number of the products is given but neither the test report results nor chemical analysis are announced. An example of the type 2.1 is presented in figure 1.

- **Test report 2.2 - EN 10204:2004**

With the type 2.2 test report document, document the steel works declares that the products are in accordance with the order. In the test report the quality control test results based on non-specific inspection are given, in accordance with the general material standards. The test results are not necessarily those from the lot supplied to the customer. The frequency of testing in this case may be at smallest 1 test per charge. The test report, type 2.2 which Ruukki supplies to customers also

includes chemical analysis, an example of this type of document being shown in figure 2.

- **Inspection certificate 3.1 - EN 10204:2004**

The type 3.1 inspection certificate replaces the type 3.1 B document in the previous edition of EN 10204, see table 1.

With the type 3.1, inspection certificate Ruukki declares that the products are in accordance with the order. The relevant test results and chemical analysis results are presented in this document. The test unit and testing requirements are defined in the material specification, official regulations and/or the order. For each delivery at least one plate or coil is tested. The testing for pressure equipment steels is usually stricter than that for other steels. Previously testing was carried out on both ends of every parent plate. Currently for most grades of pressure equipment steels, testing of one end of the parent plate is sufficient. The test unit at the Ruukki's Raahe Works for pressure equipment steels is a maximum of approximately 11 tonnes i.e. the maximum weight of a single plate delivery, or approximately 30 tonnes i.e. the maximum weight of a single coil delivery. The inspection certificate type 3.1 is validated by the manufacturer's authorized inspection representative, who is independent of the works production organisation. An example of this type of inspection document is given in figure 3.

Ruukki's Raahe Works quality management system is certified in accordance with the requirements of the Pressure Equipment Directive (PED). Based on this Ruukki provides EN pressure equipment steels with a PED based inspection certificate, when this is agreed with the order. The inspection certificate designation in this case is: EN 10204:2004-3.1/PED 97/23/EC. An example of this type of certificate is given in figure 4.

- **Inspection certificate 3.2 - EN 10204:2004**

The type 3.2 inspection certificate replaces the type 3.1.A and 3.1.C inspection certificates and the inspection report 3.2 in the previous edition of EN 10204, see table 1.

In the type 3.2 inspection certificate both the steel works and either an inspector authorised by the customer or designated by the official regulations certify that the products are in accordance with the order. Ruukki is represented by the manufacturer's authorized inspection representative, who is independent of the works production organisation. This inspection certificate presents the results of the materials testing. The test unit and testing requirements are defined in the material specification, official regulations and/or the order. The test report, type 3.2 which Ruukki supplies to customers includes, in addition to materials testing results, also

relevant chemical analysis results.

- **Analysis certificate**

If requested, Ruukki will supply a so called Analysis certificate in place of the standard inspection certificate, in which the chemical analysis of the charge is given in the scope required by the customer.

- **Mill sheet and test certificate**

In accordance with the regulations of the Classification Societies, a so called Mill Sheet and Test Certificate will be provided for shipbuilding steels. In this, materials testing results and chemical analyses results are presented. The nearest equivalent inspection document to this certificate in the EN 10204:2004 is the inspection certificate 3.2.

- **Choice and price of inspection documents**

The type and price of the inspection document to be supplied must always be agreed with the order. However, Ruukki will, without separate agreement, supply inspection certificate 3.1 for pressure equipment steels, and mill sheet and test certificate of the relevant classification society for shipbuilding steels.

- **Dispatch and archiving of inspection documents**

Inspection documents in accordance with EN 10204:2004 are supplied to the customer by the Ruukki in the electronic data form. Inspection documents are archived in accordance with the legal and archiving regulations. Inspection documents are supplied in the language preferred by the customer, the alternatives available being the English, French, German and Finnish languages. The number of copies and the postal address for the inspection documents is to be agreed with the order.

- **Inspection documents in electronic data form**

It is possible to transmit copies of the EN 10204:2004 inspection certificates type 2.1, 2.2 and 3.1 by the eRuukki system in electronic data form, if this is agreed in connection with the order. The language used for these documents is either English or Finnish. In this case the original, complete inspection documents are in the electronic form, the transmission of which to the customer must be separately agreed. Customers may conduct business on the eRuukki system using their own user IDs.

- **Inspection documents supplied by intermediaries**

When delivering from stock an intermediary or steel service centre is responsible for ensuring that the inspection documents sent to the customer are those for the delivery in question, that they are traceable and are in accordance with EN 10204. The intermediary must supply the buyer with the inspection document sup-

plied by the manufacturer or a copy of this without any alteration. In order to ensure traceability between the steel product and the inspection documents the manufacturer's inspection document should include some suitable means of identifying the product. Copying of the original inspection document is allowed providing that traceability is ensured and providing also that the original document is available on request. If the intermediary has altered the condition or size of the product then an additional document indicating the changes in condition or size must be provided. This also applies to all special requirements stated in the order and which are not covered in the manufacturer's inspection document.

- **Summary of inspection documents and their correspondence**

A summary of the EN 10204:2004 inspection documents is given in table 1. In this the nearest equivalent of each type of document in the previous, now discarded version of the standard, EN 10204:1991, can also be seen.

- **The designations of the EN 10204:2004 inspection documents**

Please, see the table 2.

- **Examples of inspection documents**

Fig 1. Declaration of compliance with the order EN 10204 - 2.1 (pages 5 and 6).

Fig 2. Test report EN 10204 - 2.2 (pages 7, 8 and 9).

Fig 3. Inspection certificate EN 10204:2004 - 3.1 (pages 10, 11 and 12).

Fig 4. Inspection certificate in accordance with PED, EN 10204:2004-3.1/PED 97/23/EC for pressure equipment steels (pages 13, 14 and 15).

Fig 5. Inspection certificate 3.1 - EN 10204:2004 and CE label on an extra page (page 16).

- **Inspection documents for steel products of pressure equipment**

Please note that the terms "certificate of specific product control" of PED 97/23/EC and "inspection document based on specific inspection" of EN 10204:2004 are equivalent.

- **Warning**

Other requirements and other EU Directives than PED may be applicable to the pressure equipment steel product(s) falling within the scope of EN 10204:2004.

- **CE label**

Ruukki's Raahe works is authorised to use the CE label for structural steels according to EN 10025-2, -3, -4 and -5:2004 as well as for the structural steel S690QL grade EN 10025-6:2009. The CE label is marked on an extra page of inspection certificate 3.1 (figure 5).

• **EN 10204:2004 inspection documents and their nearest equivalents in the previous documents.**

Table 1

| EN 10204:2004 Reference | EN 10204:2004 Designation of the document type | EN 10204:1991 Withdrawn inspection documents |
|-------------------------|--|---|
| Type 2.1 | Declaration of compliance with the order | Certificate of compliance with the order 2.1 |
| Type 2.2 | Test report | Test report 2.2 |
| Type 3.1 | Inspection certificate 3.1 | Inspection certificate 3.1.B |
| Type 3.2 | Inspection certificate 3.2 | Inspection report 3.2 Inspection certificate 3.1.A Inspection certificate 3.1.C |

• **A summary of the EN 10204:2004 inspection documents in four languages and the document content as well as the validator of document.**

Table 2

| Designation of the document type | | | | Document content | Document validated by |
|--|--------------------------------------|-----------------------------------|-------------------------------------|---|---|
| English | German | Swedish | Finnish | | |
| Declaration of compliance with the order 2.1 ¹⁾ | Werksbescheinigung 2.1 ¹⁾ | Identitetsintyg 2.1 ¹⁾ | Laatuvakuutus 2.1 ¹⁾ | Statement of compliance with the order | The manufacturer (of the steel product) |
| Test report 2.2 ¹⁾ | Werkszeugnis 2.2 ¹⁾ | Kvalitetsintyg 2.2 ¹⁾ | Koetustodistus 2.2 ¹⁾ | Statement of compliance with the order, with indication of results of non-specific inspection | The manufacturer (of the steel product) |
| Inspection certificate 3.1 ²⁾ | Abnahmeprüfzeugnis 3.1 ²⁾ | Provningsintyg 3.1 ²⁾ | Vastaanottodistus 3.1 ²⁾ | Statement of compliance with the order, with indication of results of specific inspection | The manufacturer's authorized inspection representative independent of the manufacturing department |
| Inspection certificate 3.2 ²⁾ | Abnahmeprüfzeugnis 3.2 ²⁾ | Provningsintyg 3.2 ²⁾ | Vastaanottodistus 3.2 ²⁾ | Statement of compliance with the order, with indication of results of specific inspection | The manufacturer's authorized inspection representative independent of the manufacturing department and either the purchaser's authorized inspection representative or the inspector designated by the official regulations |

¹⁾ inspection document based on non-specific inspection of the steel product

²⁾ inspection document based on specific inspection of the steel product

ANESTODISTUS TEST REPORT
EN 10 204-2.1

RUUKKI

Titelisi Purchaser: **RAUTARUUKKI OYJ**
RUUKKI METALS
 Tilaus nro. Order No: **09.06.2009**

Yht. Grade: **RAEX 500**
 Laatuvaatimus Quality Specifications: **ABRASION RESISTANT STEEL**

2/2
A 21235 -001 B
09.06.2009

Päivämäärä Date: **09.06.2009**
 Valmistajan merkki Mark of the Manufacturer: **SMN**

Jalkuvaalettua happiterästä
 Oxygen steel, continuous casting

Vietaa Consignee: **RAUTARUUKKI OYJ**
RUUKKI METALS
 Asiakkaan merkki Shipping mark: **09.06.2009**

Lisävaatimukset Additional requirements:

| Pos. Item | Suunn. ja erä nro Cust. Item No | T-tila Cond | Vetokoe Tensile test | | | | K2 °C | R ₁₀₅ MPa | R _{EL} MPa | R _{EH} MPa | R _M MPa | A % | REH /RM | RM * AS | RAZ % | Keskiluvu Average | Täntökokee Bend test | Huom No | Päästö Tempering °C |
|-----------|------------------------------------|----------------|----------------------|---------------------|---------------------|--------------------|-------|----------------------|---------------------|---------------------|--------------------|-----|---------|---------|-------|----------------------|-------------------------|------------|------------------------|
| | | | R ₁₀₅ MPa | R _{EL} MPa | R _{EH} MPa | R _M MPa | | | | | | | | | | | | | |
| 036 | 53229 372 | Q | | | | | | | | | | | | | | | | | |

Q -QUENCHED

Raahе Steel Works
 Testaus ja tarkastus Testing and inspection

Minna Valkama
MINNA VALKAMA
 Valtuutettu tarkastaja Authorized Inspector

Yhdist. nimi Company Name: **RAUTARUUKKI OYJ**
 Kotipaikka Registered Office: **HELSINKI**

Tilaukseen todistamme, että toimitus on tilaukseen kuvattuihin mukainen.
 We hereby certify that the material described above has been tested and complies with the terms of the order contract.

Puhelin Telephone: **020 5911**
 +358 20 5911

Yhteystiedot Contact Information: **020 592 2718**
 +358 20 592 2736

Y-tunnus Business ID: **0113276-9**

RT97

Figure 1. Declaration of compliance with the order EN 10204 - 2.1 (page 2/2).

AINESTODISTUS TEST REPORT

EN 10 204-2.2

2/3
76895K-001 A
09.06.2009

RUUKKI

Tilaaaja Purchaser: RAUTARUUKKI OYJ
 Vastavotaja Consignee: RAUTARUUKKI OYJ
 Valmistaja Manufacturer: RUUKKI METALS
 Tilaus nro. Order No: 09.06.2009
 Toimitusmerkki Shipping mark: 09.06.2009

Laji Grade: RAEX 400
 Laatuvaatimukset Additional requirements: Litävaatimukset

Laatuvaatimukset Additional requirements: Litävaatimukset

Leikkausluokka Quality Specifications: ABRASION RESISTANT STEEL

Päivämäärä Date: 09.06.2009
 Valmistusmerkki Mark of the Manufacturer: SMNT

Jäljennäköinen huppuvaatimus Oxygen steel, continuous casting

| Pos. Item | Sulatus, l. eri nro. Cast. test No | Tilaus Cond | Vetokokeet Tensile test | | REH MPa | REB MPa | RM MPa | RM ⁰ AS | K1000 MPa | K1000 % | K1000 Average | K1000 D = Xt | Huom. No | Päästö Tempering °C |
|--------------|------------------------------------|----------------------|-------------------------|-------|---------|---------|--------------------|--------------------|-----------|---------|---------------|--------------------|----------|---------------------|
| | | | K2 °C | K3 °C | | | | | | | | | | |
| 010 | 72430 | 021 | Q | | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | | |
| Q - QUENCHED | | | | | | | | | | | | | | |
| Pos. Item | Sulatus, l. eri nro. Cast. test No | Isäluoke Impact test | K3 °C | 1 | 2 | 3 | Keskiverto Average | K4 °C | 1 | 2 | 3 | Keskiverto Average | Huom. No | |
| 010 | 72430 | 021 | K4 | 3A | | | 3A | 3A | 3A | | | | | |

Täteen todistamme, että toimittamamme materiaali on laatuvaatimusten mukainen.
 We hereby certify that the material described above has been tested and complies with the terms of the order contract.

Rahe Steel Works
 Testaus ja tarkastus Testing and inspection

Minna Valkama
MINNA VALKAMA
 Valmistuksen tarkastaja Authorized Inspector
 Rahe Steel Works Ltd.
 Rahe, Finland

Yhteystiedot Contact information:
 Puhelin Telephone: 020 6511
 Faksi Fax: 020 6512
 Sähköposti E-mail: rahe@ruukki.fi
 Y-tunnus Business ID: 0113276-9

Figure 2. Test report EN 10204 - 2.2 (page 2/3)

RUUKKI

ANALYYSITODISTUS ANALYSIS CERTIFICATE
ANALYSEBESCHEINIGUNG COMPOSITIO CHIMIQUE CERTIFICAT
СЕРТИФИКАТ АНАЛИЗА

3/3
 76895K-001 A
 09.06.2009

Päivämäärä Date Datum Date Date
 09.06.2009
 SMN

| Sulatus nro Cast No Schmelznr № Провар | Kok. nro Item No Posti № Провод | Prosessi Cekki Cekki Cekki Cekki | Analyysi % Chemisch Zusammensetzung % Composition Chimique % (1*1000) | | | | | | | | | | | |
|---|--|--|---|-----|------|------|------|------|------|------|------|------|------|------|
| | | | C | SI | MN | P | S | AL | N | CU | CR | NI | MO | SN |
| 72430 | 010 | .48 | .136 | .20 | 1.04 | .008 | .004 | .038 | .007 | .024 | 0.81 | 0.06 | .008 | .003 |

CE0=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

Raabe Steel Works

Testaus ja tarkastus
Prüfung und Kontrolle

Испытание и контроль качества

Steel manufactured and supplied by RaabeRuukki is free from radiation.
 Произведено на металлургическом комбинате «Рааберауки» и поставлено заказчику сталь безлучевой радиации.

Minna

MINNA VALKAMA
 Valtuutettu tarkastaja
 Уполномоченный инспектор

Yhtiön nimi Company Name: RAUTARUUKKI OYJ
 Kotipaikka Headstard Office: HELSINKI

Puhelin Telephone: 020 5611
 +358 20 562 2736
 Puhelin Telefax: 020 562 2736
 +358 20 562 2736
 Y-tunnus Business ID: 0113276-9

Figure 2. Test report EN 10204 - 2.2 (page 3/3).

RUUKKI

Tilaja Purchaser
RAUTARUUKKI OYJ
 FI-92101 RAAHE FINLAND
 Tilaus nro. Order No.
08.06.2009
 Toimitus Certificate

EN 10 204-3.1 (2004)

Vastaanottaja Consignee
RAUTARUUKKI OYJ
 FI-92101 RAAHE FINLAND
 Asiakkaan nimi. Shipping mark
08.06.2009
 Laatuvaraus Quality Stamping
OPTIM 650 MC

1/3
 77758U-001 B
 08.06.2009

Päivämäärä Date
08.06.2009
 Valmistajan merkki
 Mark of the Manufacturer

Arkkien leima
 Stamp of work's Inspector
Mxx
 Vastastöittäjän leima
 Stamp of Surveyor
 Muut leimaukset
 Other Stamps

31

Tehtävätyyppi Delivery type
PART DELIVERY

Tuote Product
CUT LENGTHS

Laatuasteus Quality Specifications
OPTIM 650 MC

HIGH STRENGTH FORMABLE STEEL, MEETS REQ. OF EN10149-2 S650MC

| Posio Item | Määrä Quantity | Merkki Mark | Kpl Pcs | Paino kg Weight Kg | Suurus levy nro Cast plate No | SP nro SP No | UT UT | MT MT |
|--|-------------------|----------------|------------|-----------------------|----------------------------------|-----------------|------------|----------|
| H.R. STEEL PL IN BUNDLES CUT LENGTHS MILL EDGES PICKLED DEAD FLAT PROCESSED | | | | | | | | |
| 020 4.00 X 1500 X 3000 | 92 | | 92 | 13050 | 72280 | 021 | 021 | |
| | | | *** | 92 | 13050 | | | |

Tekniset vaatimukset ja/tai viralliset määräykset Technical terms of Delivery and/or Official Regulations

Täsen todistamme, että toimitus on tilausvahvistuksen mukainen.
 We hereby certify that the material described above has been tested and complies with the terms of the order contract.

Raahen Steel Works
 Testaus ja tarkastus Testing and Inspection

Minna Valkama
MINNA VALKAMA
 Valtuutettu tarkastaja Authorized Inspector

Yhtiön nimi Company Name: **RAUTARUUKKI OYJ**
 Kotipaikka Registered Office: **HELSINKI**

Postiosoite P.O. Box: **PL 93, P.O. Box 93**
 Osoite Address: **FI-92101 RAAHE, FINLAND**

Puhelin Telephone: **020 9911**
 +358 20 9911

Telekopio Telefax: **020 992 2736**
 +358 20 992 2736

Y-tunnus Business ID: **0113276-9**

RTX60

Figure 3. Inspection certificate EN 10204:2004 - 3.1 (page 1/3).

AINESTODISTUS TEST REPORT
EN 10 204-3.1 (2004)

RUUKKI

Tilaaaja Purchaser: **RAUTARUUKKI OYJ**
RAUTARUUKKI OYJ
Tilauksen nro. Order No.: **08.06.2009**

Laatuvaatimus Quality Specifications: **OPTIM 650 MC**
HIGH STRENGTH FORMABLE STEEL, MEETS REQ. OF EN10149-2 S650MC

2/3
77758U-001 B
08.06.2009

Päivämäärä Date: **08.06.2009**
SMM
Valmistajan merkki Mark of the Manufacturer:

Jatkuvavälvetua happoterästä
Oxygen steel, continuous casting

| Pos. Item | Sovitin, k and nro Cast. Test No. | T-tila Cond | Vetokoe Tensile test | K2 | °C | 6502 MPa | 6508 MPa | 6508 MPa | REH MPa | REH MPa | REH /FRU | RM + A5 | RM + A5 | RAZ, % | Keskiarvo Average | K5 | D = X 1 | Täydennetty Bend test | Huom. Nb | Päästö Tempering °C |
|-----------|-----------------------------------|-------------|----------------------|----|----|----------|----------|----------|---------|---------|----------|---------|---------|--------|-------------------|-----|---------|-----------------------|----------|---------------------|
| 020 | 72280 | 021 | TM | 32 | | 730 | 792 | | 20 | | | | | | 32 | 2.0 | | | | |

TM=THERMOMECH. TREATED

Raahel Steel Works
Testaus ja tarkastus Testing and Inspection

MINNA VALKAMA
Valtuutettu tarkastaja Authorized Inspector

Yhtiön nimi Company Name: **RAUTARUUKKI OYJ**
Rajapainama Registered Office: **HELSINKI**

Osoite Address: **PL 93, P.O. Box 93
FIN-02101 TOUHAHE, FINLAND**

Puhelin Telephone: **020 9911
+358 20 9911**

Telefoni Telefax: **020 562 2736
+358 20 562 2736**

Y-tunnus Business ID: **0113276-9**

Figure 3. Inspection certificate EN 10204:2004 - 3.1 (page 2/3).

RUUKKI

ANALYYSITODISTUS ANALYSIS CERTIFICATE
ANALYSEBESCHEINIGUNG COMPOSITIO CHIMIQUE CERTIFICAT
СЕРТИФИКАТ АНАЛИЗА

3/3
 777580-001 B
 08.06.2009
 SMN

Päivämäärä Date Datum Date Jara
 08.06.2009

| Koe no Cast No Schmelzen Nr No de coulée № плавки | Position Item Pos. Poste Поз. | C | SI | MN | P | S | AL | NB | V | TI | N | MO | | |
|---|---|------|------|------|-----|------|------|------|------|------|------|------|------|------|
| 72280 | 020 | .020 | .037 | .059 | .18 | 1.76 | .007 | .002 | .029 | .046 | .010 | .087 | .006 | .006 |

(* ppm)

CEQ=C+NB/6+(CR+MO+V)/5+(NI+CU)/15

Raahе Steel Works

Tuotteen ja laadun
Prüfung und Kontrolle

Tekijä ja tarkastus
Essais et Contrôle

Mineralne ja karbonne elektris

Minna Valkama

MINNA VALKAMA
 Valuutalon tarkastaja
 Wenschauferinspektör
 Yhtymävalvonnan esikonttori

Yhtymän nimi Company Name: RAUTARUUKKI OYJ
 Korpokkaa Registered Office: HELSINKI

Postiosoite Address: PL 93, P.O. Box 93
 FIN-92101 RAAHE, FINLAND

Puhelin Telephone: 020 5911
 +358 20 5911

Telefonin Tiedot: 020 592 2736
 +358 20 592 2736

Yrityksen Yhtymä ID: 0113276-9

Steel manufactured and supplied by Rautearuuki is free from radiation.
 Производственный материал, поставляемый в Раутаруукки не содержит радиоактивных веществ.

Figure 3. Inspection certificate EN 10204:2004 - 3.1 (page 3/3).

VASTAANOTTOTODISTUS 3.1 INSPECTION CERTIFICATE 3.1

EN 10 204-3.1 (2004)/PED 97/23/EC/DNV.

1/3

A 23110 -001 A
09.06.2009

RUUKKI

Tilaja Purchaser
RAUTARUUKKI OYJ
FI-92101 RAAHE FINLAND
Tilauksen numero Order Confirmation
23110
09.06.2009
Tilauksen merkki Shipping mark

Todistus Certificate
3NVPED

Toimitustyyppi Delivery type
PART DELIVERY

Tuote Product
HEAVY PLATES
Laji Grade
P265GH EN 10028-2:2003
Laatuvaatimukset Quality Specifications
PRESSURE VESSEL STEEL

Paasto Item
Mitat mm Dimensions mm

Vastaanottaja Consignee
RAUTARUUKKI OYJ
FI-92101 RAAHE FINLAND
Aukkosen merkki Shipping mark
09.06.2009
Laatuvaatimukset Quality Stamping
P265GH

Sulatus levy numero Cast No. Plate No.
X.X.X.X X.X.X X.X X.X.X

Toleranssit Tolerances
EN 10028:1991 CLASS B

Tekniset vaatimukset ja/tai viralliset määräykset Technical terms of Delivery and/or Official Regulations

| SP-oso SP No. | UUT MT | SP-oso SP No. | UUT MT |
|------------------|--------------------|------------------|-----------|
| 1 | 9664 72067 012 012 | 1 | 9664 |
| | | *** | 9664 |

NORMALIZED STEEL PLATES
SURFACE CONDITION EN 10 163-2:2005 CLASS B3
002 130.00 X 2000 X 4600

Raahen Steel Works
Testaus ja tarkastus Testing and Inspection

Minna Valkama

MINNA VALKAMA
Valtuutettu tarkastaja Authorized Inspector
Yhtiön nimi Company Name: RAUTARUUKKI OYJ
Kotipaikka Registered Office: HELSINKI

Taken todistamme, että toimitus on tilauksethuviuksen mukainen.
We hereby certify that the material described above has been tested and complies with the terms of the order contract.

Certified to comply with the Pressure Equipment Directive 97/23/EC annex 1, section 4.3, by DNV / (0575, MMS-RSP-2) according to the quality system standard EN ISO 9001:2000. Certificate No. 53665-2009-AQ-FIN-FINMS

Osoite Address: PL 93, P.O.Box 93
FIN-92101 RAAHE, FINLAND

Puhelin Telephone: 020 5911
+358 20 5911

Telekopio Telefax: 020 592 2736
+358 20 592 2736

Y-tunnus Business ID: 0113276-9

RTX09

Figure 4. Inspection certificate in accordance with PED, EN 10204:2004-3.1/PED 97/23/EC for pressure equipment steels (page 1/3).

AINESTODISTUS TEST REPORT
 EN 10 204-3.1 (2004)/PED 97/23/EC/DNV.
 2/3
 A 23110 -001 A
 09.06.2009

RUUKKI
 Tilaaja - Purchaser
 RAUTARUUKKI OYJ
 RUUKKI METALS
 Tilaus nro. Order No.
 09.06.2009

Vastaanotaja - Consignee
 RAUTARUUKKI OYJ
 RUUKKI METALS
 Aluekään markki - Shipping mark
 09.06.2009

Laji - Grade
 P265GH
 Laatuvaatimukset - Quality Specifications
 PRESSURE VESSEL STEEL

Yhdysohje - Additional requirements
 Jatkuvavakautus happerattaisella
 Oxygen steel, continuous casting

Päivämäärä - Date
 09.06.2009
 SMN
 Valmistajan nimi - Mark of the Manufacturer

Yhdysohje - Additional requirements
 Jatkuvavakautus happerattaisella
 Oxygen steel, continuous casting

Yhdysohje - Additional requirements
 Jatkuvavakautus happerattaisella
 Oxygen steel, continuous casting

| Pos. Item | Suutus, k. eri nro Cast. test No. | T. tila Cond. | Vetokeho - Tensile test | | | REH MPa | REH MPa | REH MPa | RT05 MPa | RM MPa | RM MPa | RM MPa | RM MPa | RM MPa | RAZ % | Kesäarvo Average | Kesäarvo Average | Kesäarvo Average | Huom Nb | Päästö Tempering °C | |
|--|--------------------------------------|--------------------------|-------------------------|------|-----|------------|------------|---------------------|--------------------------------|-----------|-----------|-----------|---------------------|-----------------------------|----------|---------------------|---------------------|---------------------|---------------------|---------------------------|-----|
| | | | K2 | °C | MPa | | | | | | | | | | | | | | | | MPa |
| 002 | 72067 | 012 | N 51 | | | | | | | | | | | | | | | | | | |
| | 011 | N 5C | +300 | 217 | | | | | | | | | | | | | | | | | |
| K2: 51=BOTTOM,TRANSV. 5C=RPO2 | | | | | | | | | | | | | | | | | | | | | |
| N=NORMALIZED | | | | | | | | | | | | | | | | | | | | | |
| Pos. Item | Suutus, k. eri nro Cast. test No. | Tilauksen Impact test | K3 | °C | 1 | 2 | 3 | Kesäarvo Average | Sivokmurto Ductile fracture | 1 | 2 | 3 | Kesäarvo Average | Ensisokeet Special tests | K4 | °C | 1 | 2 | Kesäarvo Average | Huom Nb | |
| 002 | 72067 | 012 | 1B2 | -020 | 68 | 63 | 82 | 71 | | | | | | | | | | | | | |
| K3: 1B2=CH-VISO-VUJ,10X10,BOTTOM TIA,TRANSV. | | | | | | | | | | | | | | | | | | | | | |

Tilien todistamme, että loppuosa on valmistusvaatimusten mukainen.
 We hereby certify that the material described above has been tested and complies with the terms of the order contract.

Raabe Steel Works
 Testaus ja tarkastus - Testing and inspection

MINNA VALKAMA
 Valtuutettu tarkastaja - Authorized Inspector
 Yhtiön nimi - Company Name: RAUTARUUKKI OYJ
 Käsipäivä - Registered Office: HELSINKI

Osioite Address: PL 93, P.O. Box 93
 FIN-02101 RAUHAHE, FINLAND
 Puhelin Telephone: 020 5911
 +358 20 5911
 Telekopio Telefax: 020 592 2736
 +358 20 592 2736
 Y-tunnus Business ID: 0113276-9

Figure 4. Inspection certificate in accordance with PED, EN 10204:2004-3.1/PED 97/23/EC for pressure equipment steels (page 2/3).

| | | | | | |
|--|--|--|--|--|--|
| RUUKKI | | EN 10 204-3.1 (2004) | | 1/4 A 23782 -001 B 08.06.2009 | |
| Tilaja / Purchaser RAUTARUUKKI OYJ FI-92101 RAAHE FINLAND Tilaus nro / Order No. 08.06.2009 Tositus / Certificate 31 | | Vastaanottaja / Consignee RAUTARUUKKI OYJ FI-92101 RAAHE FINLAND Asiakkaan merkki / Shipping mark 08.06.2009 Laatuvaraus / Quality Stamping S355K2 N S355J2 N S355J0 N Sulatus nro levy nro / Cast No. / Plate No. XXXXX XXX XX XXX Toleranssit / Tolerances EN 10029:1991 CLASS A | | Päivämäärä / Date 08.06.2009 Valmistajan merkki / Mark of the Manufacturer  Tarkastajan leima / Stamp of work's Inspector  Vastaanottajan leima / Stamp of Receiver Muut leimat / Other Stamps Tekniset vaatimukset ja/tai viralliset määräykset / Technical terms of Delivery and/or Official Regulations | |
| Toimitustyyppi / Delivery type PART DELIVERY Tuote / Product HEAVY PLATES Laji / Grade MULTISTEEL/S355K2+N EN 10025-2:2004 Laatuselitys / Quality Specifications STRUCTURAL STEEL MEETS REQ. OF EN 10025-2 S355K2/J2/J0 | | | | | |



0045

RUUKKI PRODUCTION

CERT-No.: 0045-CPD-0573

MULTISTEEL/S355K2+N
EN 10025-2:2004

Raah Steel Works
 Testaus ja tarkastus / Testing and Inspection

MINNA VALKAMA

| | | | | |
|---|-------------------------------------|-------------------------------|---------------------------------|-----------------------------------|
| Yhtiön nimi / Company Name: RAUTARUUKKI OYJ | Osasto / Address: PL 93, P.O.Box 93 | Puhelin / Telephone: 020 5911 | Telekopio / Telex: 020 592 2736 | Y-tunnus / Business ID: 0113276-9 |
| Kotipaikka / Registered Office: HELSINKI | FI-92101 RAAHE, FINLAND | +358 20 5911 | +358 20 562 2736 | |

Figure 5. Inspection certificate 3.1 - EN 10204:2004 and additional page with CE label. In addition, e.g. the Multisteel plate is marked with the designation information of the steel grades.

- **Our Customer Service is happy to give you further information**

Sales, Technical Customer Support

info.metals@ruukki.com

Rautaruukki Corporation, P.O. Box 138, FI-00811 Helsinki, Finland. tel. +358 20 5911

www.ruukki.com

This data sheet is accurate to the best of our knowledge and understanding. Although every effort has been made to ensure accuracy, the company cannot accept responsibility for any loss, damage or other consequence resulting from the use of this publication. We reserve the right to make changes.

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