

# INSPECTION DOCUMENTS

HOT-ROLLED STEEL PLATES AND COILS

**RUUKKI**

Energy-efficient steel solutions for better LIVING. WORKING. MOVING.

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

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 supplied 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 marking**

Ruukki's Raahe works is authorised to use the CE marking 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 marking is marked on an extra page of inspection certificate 3.1 (figure 5).

**Table 1. EN 10204:2004 inspection documents and their nearest equivalents in the previous documents**

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

**Table 2. A summary of the EN 10204:2004 inspection documents in four languages and the document content as well as the validator of document**

Designation of the document type				Document content	Document validated by
English	German	Swedish	Finnish		
Declaration of compliance with the order 2.1 <sup>1)</sup>	Werksbescheinigung 2.1 <sup>1)</sup>	Identitetsintyg 2.1 <sup>1)</sup>	Laatu- vakuutus 2.1 <sup>1)</sup>	Statement of compliance with the order	The manufacturer (of the steel product)
Test report 2.2 <sup>1)</sup>	Werkszeugnis 2.2 <sup>1)</sup>	Kvalitetsintyg 2.2 <sup>1)</sup>	Koetus- todistus 2.2 <sup>1)</sup>	Statement of compliance with the order, with indication of results of non-specific inspection	The manufacturer (of the steel product)
Inspection certificate 3.1 <sup>2)</sup>	Abnahme- prüfzeugnis 3.1 <sup>2)</sup>	Provningsintyg 3.1 <sup>2)</sup>	Vastaanotto- todistus 3.1 <sup>2)</sup>	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 <sup>2)</sup>	Abnahme- prüfzeugnis 3.2 <sup>2)</sup>	Provningsintyg 3.2 <sup>2)</sup>	Vastaanotto- todistus 3.2 <sup>2)</sup>	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

<sup>1)</sup> inspection document based on non-specific inspection of the steel product.

<sup>2)</sup> inspection document based on specific inspection of the steel product.



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A 12491 -001 A  
04.07.2013

EN 10 204-2.1

Tilaaaja Purchaser: RUUKKI METALS OY  
 RUUKKI METALS OY  
 FI-92101 RAAHE, FINLAND  
 Tilauksen nro Order no.: FI-92101 RAAHE, FINLAND  
 Tilauksen vahvistus Order Confirmation: ASIAKKAAN MERKKI Shipping mark  
 SAMPLE 040713  
 Toimitus Certificate: Laivaus Shipping: B 27

Tuotteen nimi Delivery type: TOTAL DELIVERY  
 Tuote Product: HEAVY PLATES  
 Luokka Class: B.27  
 Luokituksen nimi Quality Specifications: HARDENABLE BORON STEEL

Platinointi Markki: Mxx  
 Pöytäkirja Dimensions mm: Kappaleiden määrä Qty  
 Kappaleiden määrä Qty: 2  
 Paino Weight kg: 1432  
 Kappaleiden määrä Qty: 2

Valmistuspaikka Manufacturing site: Mxx  
 Valmistuspaikan leima Stamp of Manufacturer: Mxx  
 Valmistuspaikan leima Stamp of Manufacturer: Mxx  
 Muut leimat/merkinnät Other Stamps: Mxx

Tekniset vaatimukset ja/vaihtoehtoiset tekniset vaatimukset Technical terms of Delivery and/or Official Regulations: EN 10029:2010 CLASS A

Platinointi Markki: Mxx  
 Pöytäkirja Dimensions mm: Kappaleiden määrä Qty  
 Kappaleiden määrä Qty: 2  
 Paino Weight kg: 1432  
 Kappaleiden määrä Qty: 2

Valmistuspaikka Manufacturing site: Mxx  
 Valmistuspaikan leima Stamp of Manufacturer: Mxx  
 Valmistuspaikan leima Stamp of Manufacturer: Mxx  
 Muut leimat/merkinnät Other Stamps: Mxx

Tekniset vaatimukset ja/vaihtoehtoiset tekniset vaatimukset Technical terms of Delivery and/or Official Regulations: EN 10029:2010 CLASS A

Platinointi Markki: Mxx  
 Pöytäkirja Dimensions mm: Kappaleiden määrä Qty  
 Kappaleiden määrä Qty: 2  
 Paino Weight kg: 1432  
 Kappaleiden määrä Qty: 2

Valmistuspaikka Manufacturing site: Mxx  
 Valmistuspaikan leima Stamp of Manufacturer: Mxx  
 Valmistuspaikan leima Stamp of Manufacturer: Mxx  
 Muut leimat/merkinnät Other Stamps: Mxx

Tekniset vaatimukset ja/vaihtoehtoiset tekniset vaatimukset Technical terms of Delivery and/or Official Regulations: EN 10029:2010 CLASS A

Platinointi Markki: Mxx  
 Pöytäkirja Dimensions mm: Kappaleiden määrä Qty  
 Kappaleiden määrä Qty: 2  
 Paino Weight kg: 1432  
 Kappaleiden määrä Qty: 2

Valmistuspaikka Manufacturing site: Mxx  
 Valmistuspaikan leima Stamp of Manufacturer: Mxx  
 Valmistuspaikan leima Stamp of Manufacturer: Mxx  
 Muut leimat/merkinnät Other Stamps: Mxx

Tekniset vaatimukset ja/vaihtoehtoiset tekniset vaatimukset Technical terms of Delivery and/or Official Regulations: EN 10029:2010 CLASS A

Platinointi Markki: Mxx  
 Pöytäkirja Dimensions mm: Kappaleiden määrä Qty  
 Kappaleiden määrä Qty: 2  
 Paino Weight kg: 1432  
 Kappaleiden määrä Qty: 2

Valmistuspaikka Manufacturing site: Mxx  
 Valmistuspaikan leima Stamp of Manufacturer: Mxx  
 Valmistuspaikan leima Stamp of Manufacturer: Mxx  
 Muut leimat/merkinnät Other Stamps: Mxx

**Raahen Steel Works**

Tarkastus ja tarkastus: Testing and Inspection

Yrityksen nimi, Company Name: RUUKKI METALS OY  
 Keskikaipa Registered Office: HELSINKI  
 Osoite Address: PL 93, P.O. Box 93  
 FIN-92101 RAAHE, FINLAND  
 Puhelin Telephone: 020 9911  
 +358 20 3911  
 Teleskooppi Telefax: 020 992 2739  
 +358 20 992 2739  
 Y-tunnus Business ID: 2389445-7



# AINESTODISTUS TEST REPORT

2/2

A 12491 -001 A  
04.07.2013

EN 10 204-2.1

Ostaja / Purchaser: RUUKKI METALS OY  
 RUUKKI METALS OY  
 RAAHE STEEL WORKS  
 Tilaus nro / Order No.: RAAHE STEEL WORKS  
 SAMPLE 040713  
 Toimitusmerkki / Shipping mark:

Vastaanottaja / Consignee: RUUKKI METALS OY  
 RAAHE STEEL WORKS  
 Aika- ja merkki / Shipping mark: SAMPLE 040713

Päättämispäivä / Date: 04.07.2013  
 Valmistajan merkki / Mark of the Manufacturer: SMN



Lisävaatimukset / Additional requirements:  
 Jokaavaruus nappineistillä / Oxygen steel, continuous casting  
 Fully killed. Fine grain practice

Laatuvaatimus / Quality Specifications:  
 HARDENABLE BORON STEEL

Pos. / Item	Sulatuskera / Cast test No	Tila / Cond.	Vetokoe / Tensile test (EN ISO 6892-1:2009 B; EN ISO 6892-2:2011 B):	REH / MPa			REK / MPa			Rm / MPa			RAZ / %			K5 / D = X:1		Päättö / Tempering °C
				RK2	°C	MPa	REH	MPa	REK	MPa	Rm	MPa	RAZ	%	K5	D = X:1		
004	71870	022	NR	1	3	50	60	200	REN / DIN	RM * A5	1	2	3	AVG	2	3		

NR=NORMALIZING ROLLING

## Raah Steel Works

Testaus ja tarkastus / Testing and inspection

JAAKKO JUUSO  
 Valtuutettu tarkastaja / Authorized inspection representative

Yhtiön nimi / Company Name: RUUKKI METALS OY  
 Keskustiedot / Registered Office: PELLONNIEMI

Osoite / Address: PL 65, P.O Box 03  
 FIN-92101 RAAHE, FINLAND


Puhelin / Telephone: 030 5911  
 +358 20 592 2736

Telefax / Telefax: 030 592 2736  
 +358 20 592 2736

Yrityksen tunnusnumero / Business ID: 2369445-7

Tämän todistuksen, että toimitus on tilauksen mukainen, / We hereby certify that the material described above has been tested and complies with the terms of the order confirmation.

Figure 2. Test report EN 10204 - 2.2 (page 1/3).




**Tilauksen Ostaja**  
**RUUKKI METALS OY**  
 FI-92101 RAAHE, FINLAND  
 Tilauksen nro / Order No.  
**11815**  
 Tilauksen vahvistus / Order Confirmation  
**11815**  
 Todistus / Certificate  
**SAMPLE 040713**

**EN 10 204-2.2**

**Vastaanottaja / Consignee**  
**RUUKKI METALS OY**  
 FI-92101 RAAHE, FINLAND  
 Asiakkaan merkki / Shipping mark  
**SAMPLE 040713**  
**RAEX 400**

**1/3**

**A 11815 -001 A**  
 04.07.2013



**Päivämäärä / Date**  
**04.07.2013**  
 Valmistajan merkki / Mark of the Manufacturer  


---

**Tuotteen nimi / Delivery type**  
**TOTAL DELIVERY**

**Tuote / Product**  
**HEAVY PLATES**  
 Luokitus / Grade  
**RAEX 400**  
 Laatuvaatimus / Quality Specifications  
**ABRASION RESISTANT STEEL**

**Koostumus / Material**  
 Mitta / mm  
 Ohuus / Thickness  
**15.00**  
 Leveys / Width  
**1500**  
 Pituus / Length  
**3000**

**Tarkastajan leima / Stamp of Inspector**  
  
**Vastainvoimien leima / Stamp of Surveyor**  
 Muut leimaukset / Other Stamps  


**Laatuvaatimus / Quality Stamping**  
**RAEX 400**

**Status nro / levy nro / Cast No. / Plate No.**  
 X.X.X.X X.X.X X.X.X.X

**Toleranssit / Tolerances**  
**EN 10029:2010 CLASS A**

**Yhteystiedot / Contact Information**  
 Tekniset vaatimukset jättä / välttämättömät / Technical terms of Delivery and/or Official Regulations

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Plano nro / Weight kg	Kpl / PCS	Sulatus levy nro / Cast plate No	SP nro / SP No	UT / MT	UT / MT
4	2120	69274	041		
	***	4	2120		

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**Hot Rolled Steel Plates**  
**IN BUNDLES**  
**SURFACE CONDITION EN 10 163-2:2005 CLASS A3**

**Rahe Steel Works**  
 Testaus ja tarkastus / Testing and Inspection

**Yhtiön nimi / Company Name:** RUUKKI METALS OY  
**Kotipaikka / Registered Office:** HELSINKI

**Postiosoite / Address:** PL 53, P.O. Box 93  
 FIN-92101 RAAHE, FINLAND

**Puhelin / Telephone:** 020 5811  
 +358 20 5911

**Tekotietokone / Telex:** 020 692 2776  
 +358 20 592 2768

**Y-tunnus / Business ID:** 2388445-7





AINESTODISTUS TEST REPORT

2/3  
A 11815 -001 A  
04.07.2013

EN 10204-2.2

Tilasin Pyynnin  
RUUKKI METALS OY  
RAAHE STEEL WORKS  
Tilasin nro Order No.  
SAMPLE 040713

Vastaanottaja Consignee  
RUUKKI METALS OY  
RAAHE STEEL WORKS  
Asiakkaan merkki Shipping mark  
SAMPLE 040713

Päivämäärä Date  
04.07.2013  
SMN  
Valmistajan merkki  
Mark of the Manufacturer



Jalkuvälätystä puhjennettu  
Oxygen steel continuous casting  
Fully killed. Fine grain practiced

Lisävaatimukset Additional requirements

Laatuvaatimus Quality Specifications  
ABRASION RESISTANT STEEL

Pos. Item	Suunn. k. eri nro Cntrl. test No	T-tila Core	Veeoke KZ	Tensiove testi °C	Veikee KZ	RT05 MPa	RE02 MPa	RE05 MPa	REH MPa	REH MPa	A %	R50	R50 (RM)	RM * A5	RM %	Keskiv. 1-3 Average	Tavuokoke Birt test K5	D = X1	Huom. Nb	Päästö Tempering °C
010	69274	041	Q						1	2	3	1	2	3	1	2	3			

Q =QUEINCHED

Pos. Item	Suunn. k. eri nro Cntrl. test No	K3 °C	Iskuoke Impact test (EN ISO 148-1:2010)	Keskiv. Average	Sisämuuruma Ductile fracture	Ensisäleist Special tests	K4 °C	K4 °C	1 <td>2</td> <td>Keskiv. Average</td>	2	Keskiv. Average	Huom. Nb	Päästö Tempering °C								
010	69274	041	Q						1	2	3	1	2	3	1	2	3				

010 69274 041  
K3: SA-HARDNESS: BOTTOM

5A 413

Raah Steel Works

Testaus ja tarkastus Testing and inspection

JAAKKO JUUSO

Valtuutettu tarkastaja Authorized inspection representative

Yrityksen nimi Company Name: RUUKKI METALS OY  
Osoite Address: PL 93, P.O Box 93  
Korppakka Käsitelty Office: HELSINKI

Puhelin Telephone: 020 5911  
+358 20 9811


Telekopio Telefax: 020 592 2736  
+358 20 992 2736

Yrityksen Business ID: 2386445-7

Tämän todistuksen, että toimitus on laatuvaatimuksien mukainen.  
We hereby certify that the material described above has been tested and complies with the terms of the order confirmation.



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



**ANALYYSITODISTUS ANALYSIS CERTIFICATE**  
**ANALYSEBESCHEINIGUNG COMPOSITIO CHIMIQUE CERTIFICAT**  
**СЕРТИФИКАТ АНАЛИЗА**

3/3  
A 11815 -001 A  
04.07.2013

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Statutus nr. /  
 Sertifikaatin  
 Numero /  
 No. de certificat  
 Nr. Pasport

69274

Positie /  
 Loc /  
 Ort /  
 Postle /  
 Postle /  
 Postle /  
 Postle

010 .44

Analyysi % / Chemical composition % /  
 Chemisch Zusammensetzung % /  
 Composition Chimique % /  
 Состав %

	C	SI	MN	P	S	AL	N	CU	CR	NI	MO	SN
	.158	.28	1.02	.010	.001	.029	.003	.010	0.42	0.06	.094	.002

Päivämäärä Date Datum Date Data  
 04.07.2013

SMDN

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Testaus ja tarkastus: /  
 Prüfung und Inspektion: /  
 Testing and Inspection: /  
 Koneistus ja komponenttien  
 Essais et Contrôle

CEQ=C+Mn/6+(Cr+Ni+Y)/5+(Ni+Cu)/15

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Testaus ja tarkastus: /  
 Prüfung und Kontrolle: /  
 Testing and Inspection: /  
 Essais et Contrôle

**Raabe Steel Works**

Yhteystiedot ja yhteystiedot: /  
 Contact information: /  
 Yhteystiedot ja yhteystiedot: /  
 Contact information: /  
 Yhteystiedot ja yhteystiedot: /  
 Contact information: /

**JAAKKO JUUSO**  
 Valtuutettu tarkastaja /  
 Authorized inspection representative /  
 Inspektor autorizat /  
 Sachverständiger

Yhtiön nimi Company Name: /  
 RAUKKI METALS OY /  
 Katiikka Registered Office: /  
 HELSINKI

Y-tunnus Business ID: 2386445-7

Telefonin Tiedot: /  
 Telephone: /  
 020 5911 /  
 +358 20 5911

Telefonin Tiedot: /  
 Telephone: /  
 020 592 2730 /  
 +358 20 592 2730



# VASTAANOTTOTODISTUS INSPECTION CERTIFICATE

1/3  
A 12686 -001 B  
04.07.2013

Tilauksen Purchaser: RUIKKI METALS OY  
 FI-92101 RAAHE, FINLAND  
 Tilauksen Order Confirmation: FI-92101 RAAHE, FINLAND  
 Tilauksen Order No.: SAMPLE 040713  
 Tilauksen Order Confirmation: SAMPLE 040713  
 Tilauksen Order No.: SAMPLE 040713  
 Tilauksen Order Confirmation: SAMPLE 040713

Päivämäärä Date: 04.07.2013  
 Valmistajan merkki Mark of the Manufacturer:

Tarkastajan leima Stamp of Inspector:

Vastaanottajan leima Stamp of Surveyor:

Muut leimaukset Other Stamps:

Tekniset vaatimukset: jalka valmistusmääräykset Technical terms of Delivery and/or Official Regulations

Laatuvaatimus Quality Stamping: OPTIM 700 QL

Sulatus- ja levy nro. Cast No. Plate No.: XXXXX XXXX XXXX  
 Toleranssit Tolerances: EN 10029:2010 CLASS A

Positiio Item	Mitat mm Dimensions mm	Merkki Mark	Kg Pcs	Paino kg Weight kg	Suositus levy nro Cast plate No	SP nro SP No	UF UF	MT MT
1								
2			2	4800	71300	014	014	
3			2	4800				

QUENCHED AND TEMPERED STEEL  
 QUENCHED AND TEMPERED STEEL PLATES  
 MEETS REQUIREMENTS OF EN 10025-6 S 690 QL  
 SURFACE CONDITION EN 10 163-2:2005 CLASS A3  
 010 10.00 X 2500 X 12000

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

Raahen Steel Works

Testaus ja tarkastus Testing and inspection

JAAKKO JUUSO

Valtuutettu edustaja Authorized inspection representative  
Yrityksen nimi Company Name: RUIKKI METALS OY  
Kotipaikka Registered Office: HELSINKI

RTX60

P.O. Box 93  
FIN-92101 RAAHE, FINLAND

Puhelin Telephone: 020 453 1  
+358 20 3911

Telkkipöytä Telefoni: 020 562 3700  
+358 20 562 2736

Y-tunnus Business ID: 2389446-7



AINESTODISTUS TEST REPORT

EN 10 204-3.1 (2004)

2/3  
A 12686 -001 B  
04.07.2013

**Tilaus Purchaser**  
 RUUKKI METALS OY  
**RAAHE STEEL WORKS**  
 Tilaus nro Order No.  
**SAMPLE 040713**

**Vastanotaja Cons-gnee**  
 RUUKKI METALS OY  
**RAAHE STEEL WORKS**  
 Asiakkasen nimi Shipping mark  
**SAMPLE 040713**

**Päivämäärä Date**  
**04.07.2013**  
**SMN**

**OT=OPTIM 700 QL**  
**QUENCHED AND TEMPERED STEEL**  
 Lisävaatimukset Additional requirements  
 Täysin kyllästetty Fully killed, Fine grain practice

Pos. Item	Suutias. k. etä. nro Cast. test No.	Tila Code	Vetokeo Tensile test (EN ISO 6892-1:2009 B, EN ISO 6892-2:2011 B)	REH MPa	REB MPa	RM MPa	A %	REL (%)	RM * AS	RZ %	Keskiarvo Average	Keskiarvo Average	Taivutuskeo Bend test K5	D = Xt	Huom. No	Päästö Tempering °C	
010	71300 014	QT 51	760	1	2	3	80	200	1	2	3	1	2	3	1	2	3
K2: 51=BOTTON,TRANSV. <b>805</b> <b>16</b>																	

Pos. Item	Suutias. k. etä. nro Cast. test No.	Iisakeo Impact test (EN ISO 148-1:2010)	Enkaskokeet Social tests K4 °C	K1 °C	K2 °C	K3 °C	Keskiarvo Average	Keskiarvo Average	Huom. No	Päästö Tempering °C								
010	71300 014	155 -040	155	152	132	146	1	2	3	1	2	3	1	2	3	1	2	3
K3: 155=OH-VIISO-VÄJL7.5X10,60TTOM,LONGIT,KAV60																		

OT=QUENCHED + TEMPERED

Tämän todistuksen, että toimitus on tilauvatuntoon mukainen. We hereby certify that the material described above has been tested and complies with the terms of the order confirmation.

Raahen Steel Works


Testaus ja tarkastus Testing and Inspection

JAAKKO JUUSO

Yhteistyöyhteistyö Authorized inspection representative  
 Yrityksen nimi Company Name: RUUKKI METALS OY  
 Rekisteröity osoite Registered Office: HELSINKI

Osoite Address: PL 93, P.O. Box 93  
 FIN-92101 RAAHIE, FINLAND  
 Puhelin Telephone: +358 20 9911  
 Telekopio Telex: +358 20 992 2736  
 Y-sunnun Business ID: 2398445-7

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



**ANALYYSITODISTUS ANALYSIS CERTIFICATE**  
**ANALYSEBESCHEINIGUNG COMPOSITIO CHIMIQUE CERTIFICAT**  
**СЕРТИФИКАТ АНАЛИЗА**

3/3  
A. 12686 -001 B  
04.07.2013

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71300

Noi nro / Seriin nro / No de caului / № Платки	Proble / Cău / Essai No / № Проба	C	SI	MN	P	S	AL	NB	V	TI	CU	CR	NI	MO	N	B
010	.40	.154	.31	0.81	.010	.002	.042	.001	.014	.022	.012	0.31	0.04	.195	.004	.0013

Analysin % /  
Chemisch. Zusammensetzung % /  
Compoziția Chimică % /  
Анализ химии %

Proble /  
Cău /  
Essai No /  
№ Проба

04.07.2013  
SMDX

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

**Raabe Steel Works**

Testas ja tarkastus /  
Prüfung und Kontrolle

Testing and Inspection /  
Essais et Contrôle

Мониторинг качества /  
Yhtymöryhtymä

Steel manufactured and supplied by Raabe Steel is free from radiation.  
 Производственная и поставленная продукция «Раабестел» не содержит радиоактивных элементов.

---

**JAAKKO JUUSO**  
 Valtuutettu tarkastaja /  
Sachverständiger /  
Inspection nimi /  
Kotipaikka Registered Office:

Authorized inspection representative /  
Yhtymöryhtymä /  
Yhtymöryhtymä esikunta /  
Yhtymöryhtymä esikunta

PL 93, P.O. Box 93  
 FIN-02107 RUUKKI, FINLAND

020 9911  
 +358 20 5811

020 452 2736  
 +358 20 582 2736

Yhtymä Business ID: 20894457



# VASTAANOTTOTODISTUS INSPECTION CERTIFICATE

1/3  
A 12425 -002 A  
04.07.2013

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

Tilaaaja - Purchaser: RUIKKI METALS OY  
 FI-92101 RAAHE, FINLAND  
 Tilaus nro - Order No.: 12425  
 Tilauksen vahvistus - Order Confirmation: SAMPLE 040713  
 Toimitustyyppi - Delivery type: 3NVPED  
 Toimitustyyppi - Delivery type: REST DELIVERY  
 Tuote - Product: HEAVY PLATES  
 Laji - Grade: P265GH EN 10028-2:2009  
 Laatuvaatimus - Quality Specifications: PRESSURE VESSEL STEEL

Vastaanottaja - Consignee: RUIKKI METALS OY  
 FI-92101 RAAHE, FINLAND  
 Aulakkaan merkki - Shipping mark: SAMPLE 040713  
 Laatuluokka - Quality Stamping: P265GH  
 Sulatus nro levy nro - Cast No, Plate No.: X.X.X.X.X X.X.X.X.X X.X.X.X.X  
 Toleranssit - Tolerances: EN 10029:2010 CLASS B

Tekniset vaatimukset ja/tai violliset mallit: Technical terms of Delivery and/or Official Regulations

Koko - Item	Mitat mm - Dimensions mm	Merkki - Mark	Kpl - Pcs	Paino kg - Weight kg	Sulatus levy nro - Cast plate No.	SIP nro - SP No.	UT - UT	UT - UT
001	15.00 X 2400 X 9450		2	5444	70292	044	044	

**NORMALIZED STEEL PLATES**  
**SURFACE CONDITION EN 10 163-2:2005 CLASS B3**  
 \*\*\* 2 5444

Päivämäärä - Date: 05.07.2013  
 Varmistajan merkki - Mark of the Manufacturer:

Tarkastajan leima - Stamp of Inspector:   
 Vastalainottajan leima - Stamp of Surveyor:   
 Muut leimaukset - Other Stamps:

**Raabe Steel Works**  
 Testaus ja tarkastus - Testing and Inspection  
 Yhtiön nimi - Company Name: RUIKKI METALS OY  
 Kirjeyksien rekisteröity osoite - Registered Office: HELSINKI  
 Osoite - Address: FI-85, P.O. Box 83, FIN-92101 RAAHE, FINLAND  
 Puhelin - Telephone: +358 20 592 2736  
 Telexin nimi - Telex: 338445-7  
 Y-tunnus - Business ID: 2389445-7

Täällä todistamme, että toimiva on tilausvahvistuksen mukainen.  
 We hereby certify that the material described above has been tested and complies with the terms of the order confirmation.  
 Standard EN ISO 9001:2008. Certificate No. 91689601-201140-FIN-FINAS.



# AINESTODISTUS TEST REPORT

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

2/3  
A 12425 -002 A  
04.07.2013

**Tilasin Purchaser:** RUUKKI METALS OY  
**Tilauksen nro. Order No.:** RAAHE STEEL WORKS  
**SAAMPLE 040713**  
**Lot / Erä:** P265GH  
**Laatuvaatimukset Quality Specifications:** PRESSURE VESSEL STEEL

**Valmistaja / Manufacturer:** RUUKKI METALS OY  
**Valmistusmerkki / Mark of the Manufacturer:** RAAHE STEEL WORKS  
**Valmistusajankohta / Date:** 05.07.2013  
**Valmistuspaikka / Location:** SMN

**Ultravaatimukset Additional requirements:** Jatkuvavirtainen hapettamattomasti  
 Oxygen steel, continuous casting  
 Fully killed, Fine grain practice

Pos. Item	Suojus, kera nro / Cast. test No.	T-tila / Cond.	Vetokeho / Tensile test (EN ISO 6892-1:2009 B, EN ISO 6892-2:2011 B)		REH / MPa		A %		REH / FEM		RM * AS		RAZ %		Kestuuvo / Average	Hiomus / No.	Päättö / Tempering °C
			K2 °C	R002 MPa	R005 MPa	REH MPa	REH MPa	1	2	3	1	2	3	1			
001	70292	044	N 11	1C	+300	211	306	468							35		

K2: 11=TOP TRANSV, 1C=RP0.2

Pos. Item	Suojus, kera nro / Cast. test No.	Iskuvoima / Impact test (EN ISO 148-1:2010)	Sikaantumusta / Ductile fracture			Enkoksoketut / Special tests		Hiomus / No.	Päättö / Tempering °C				
			K3 °C	1	2	3	K4 °C			1	2		
001	70292	044	112	-020	147	150	154	150					

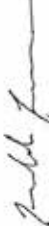
K3: 112=CH-15ISO-VU1, 10M10, TOP, TRANSV, AV100

N=NORMALIZED

**Raabe Steel Works**

Testaus ja tarkastus / Testing and Inspection

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

  
**JAAKKO JUUSO**  
 Valtuutettu tarkastaja / Authorized inspection representative

Yrityksen nimi / Company Name: RUUKKI METALS OY  
 Osoite / Address: PL 93, P.O. Box 93, FIN-92101 ROVANIEMI, FINLAND  
 Puhelin / Telephone: 020 8811 +358 20 8811  
 Faksin / Fax: 020 692 2758 +358 20 692 2758  
 Y-tunnus / Business ID: 2389445-7



**ANALYYSITODISTUS ANALYSIS CERTIFICATE**  
**ANALYSEBESCHEINIGUNG COMPOSITIO CHIMIQUE CERTIFICAT**  
**СЕРТИФИКАТ АНАЛИЗА**

3/3  
 A 12425 -002 A  
 04.07.2013  
 Päivämäärä Date Datum Date Date SMN

Analysis No Analyse-Nr Schmelz-Nr No de coulée No Procede	Cast No Gieß-Nr Ersatz-Nr No de coulée No Procede	Posible No Pos. Cis Cis Cis	Cast No Gieß-Nr Ersatz-Nr No de coulée No Procede	Posible No Pos. Cis Cis Cis	Analysis % Analyse-Zusammensetzung % Composition Chimique % Анализ химический %	1 - ppm																		
C	SI	MN	P	S	AL	NB	V	TI	CU	CR	NI	MO	N	B										
70292	001	.34	.130	.31	1.15	.009	.004	.052	.001	.009	.003	.018	0.06	0.04	.007	.003	.0001							

05.07.2013  
 05.07.2013

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

**Raahе Steel Works**

Testaus ja tarkastus / Testing and inspection / Испытание и контроль качества  
 Prüf- und Kontroll / Essais et Contrôle

*Jaakko Juuso*

**JAAKKO JUUSO**  
 Vahvuus tarkastaja / Authorized inspection representative / Уполномоченный инспектор  
 Sijaintilähtö / Inspector abroad

Yrityksen nimi / Company Name: RAUKKI METALS OY  
 Kotipaikka / Registered Office: HELSINKI

Puhelin / Telephone: 020 5911  
 +358 20 5911





Telekopio / Telex: 020 592 2735  
 +358 20 592 2735

Y-tunnus / Business ID: 2389445-7

Steel manufactured and supplied by Raahenrauke is free from radiation.  
 Производимые и поставляемые компанией «Раухе» стали не содержат радиоактивных элементов.



Figure 5. Inspection certificate 3.1 – EN 10204:2004, and additional page with CE marking. In addition, the plate is marked with the designation information of the steel grades.

<b>RUUKKI</b>		1/4 A 13187 -001 A 01.07.2013	
Tilauksen Puhdistus RUUKKI METALS OY FI-92101 RAAHE, FINLAND Tilauksen Order No. CERTIFICATE SAMPLE Tilausnumero Order Confirmation 13187 Toimitustyyppi Delivery type PART DELIVERY Tuote Product HEAVY PLATES LAI Grade MULTISTEEL/S355K2+N EN 10025-2:2004 Laatuvaatimus Quality Specification STRUCTURAL STEEL MEETS REQ. OF EN 10025-2 S355K2U2U0	Valmistaja Originator RUUKKI METALS OY FI-92101 RAAHE, FINLAND Asiakkaan nimi Shipping mark CERT. SAMPLE Laatuvaatimus Quality Stamping S355K2 N S355J2 N S355J0 N Suojakäsittelytieto Coat No. Plate No. 3.X.X.X.X 3.X.X.X.X X.X.X.X.X Toleranssi Tolerances EN 10029:2010 CLASS A	Päivämäärä Date 02.07.2013 Valmistajan merkki Mark of the Manufacturer 	Tarkastajan merkki Stamp of Inspector Valvontamiehen merkki Stamp of Surveyor 
Tekniset vaatimukset ja/tai viralliset määräykset Technical terms of Delivery and/or Official Regulations			
<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: 0 auto;">  <p style="text-align: center;">0045</p> <p style="text-align: center;">RUUKKI PRODUCTION R00001 – CPR-20130701</p> <p style="text-align: center;">MULTISTEEL/S355K2+N EN 10025-2:2004</p> <p style="text-align: center;">Intended to be used in welded, bolted and riveted structures Dangerous substance: No performance determined DOP available <a href="http://www.ruukki.com">www.ruukki.com</a></p> </div>			
<b>Raabe Steel Works</b> Tarkastus ja tarkastus Testing and Inspection  JAAKKO JUUSO			
Yhtiön nimi Company Name Ruukki Metals Oy Helsinki Registered Office	Osoite Address P.O. Box 53 FI-92101 RAAHE, FINLAND	Puhelin Telephone 020 5911 +358 20 5911	Faksin Faks 020 592 2706 +358 20 592 2706

**Ruukki provides its customers  
with energy-efficient steel  
solutions for better living,  
working and moving.**

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**RUUKKI**

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