

# Hot rolled steel plates, sheets and coils

## Markings and packing

This data sheet outlines Ruukki's practices in the packaging and marking of our hot rolled steel products.

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.

## MARKING

The purpose of marking is to enable unambiguous and permanent identification of the product. According to the EN 10021 standard (General technical delivery conditions for steel products), the manufacturer must identify their products either in accordance with the product standard or as required in the customer's order. The EN 10204 standard on inspection documents requires constant and clear traceability between the product and the inspection document.

The product standard or customers' requirements may pose additional requirements for the product markings. For example, the EN 10028-1 standard on steels for pressure purposes requires that the steel grade, manufacturer, charge number, slab number, test batch number and the manufacturer's inspection stamp always be marked on the product.

- **Plates and shop-primed and prefabricated plates**  
**Marks and marking methods**

The marking methods to be applied for plates and shop-primed plates are stencilling and stamping. In both of these, the marking is automated and the marks are similar in content. The most recommendable method, providing the best durability, is stamping. If the plates are packed the marking is complemented with a self-adhesive label on the packing.

### Stencilling

Stencilled marks on a shop-primed plates are applied in the rolling direction, either in the area used customarily by Ruukki or in an area specified by the customer in the order. If necessary, marks on plates of six (6) metres or more in length are stencilled on two locations in the same plate. Figure 1 shows a stencilled mark on a plate.

### Stamp markings and stamp field

Plates and shop-primed plates have one or more stamp fields, always with the same content. Stamp marks are applied transverse to the rolling direction at the agreed point. The type of inspection document defines how much information is to be stamped. Figure 1 shows stamps on a plate.

The start and end of a stamp is marked with white paint dots for easier recognition.

The type of stamp to be used in marking for various classification societies (Fig. 2) is determined according to the quality assurance agreement, type of inspection document and steel grade. More detailed information on these stamps is presented in the approval documents issued by the classification societies for Ruukki's quality assurance system.

For certain steel grades, restrictions are posed on the use of stamp marks. The surface quality of steel has a significant impact on laser cutting, for example. To ensure good laser cutting, we generally do not use stamp marks on steel to be cut by laser.

- **Cut lengths, coils and slit coils**  
**Marks and marking methods**

Major strip products include cut length bundles, coils and slit coils. Their identification marks are applied by ink marking, stencilling, stamping or by a marker pen or crayon. Self-adhesive labels are used to enhance identification.

### Stamp marks and stamp field

The stamp mark of strip products is shown in Figure 3.

### Cut lengths

Cut lengths are delivered in bundles weighing 1600–8000 kg, depending on the dimensions. Bundles are tied and packed as described in the "Packing" section. The weight of a bundle is always marked on it.

### Ink-jet marking

Ink-jet marks are automatically applied on each plate in a bundle of cut lengths. Ink-jet marks are always applied along the rolling direction.

### Self-adhesive product labels

Two self-adhesive labels are attached to a packed bundle of cut lengths. The product label is shown in Figure 4. The barcode on the label contains the product identification data, which the customer can transfer to their own material handling system.

### Cut lengths of patterned plate

Cut lengths of patterned plate are marked with ink like regular cut lengths. Self-adhesive labels are attached to a suitable surface. Stamp markings are not applied on cut lengths of patterned plate.

### Coils, slit strip coils and coils of patterned plate

The product identification data is always marked on the in- and outside of the coil, figure 5. Self-adhesive labels are also attached, in similar places. Slit strip coils are generally marked in the same way as coils with sheared edges.

### Stamp marking and stamp fields

Stamp marks are applied by "writing" with an air pen, except for the manufacturer's stamp and inspection stamp, which are stamped by traditional methods (Fig. 3). The location for a stamp is marked with a white or black frame, which is intended to make it easier to recognise the stamp field.

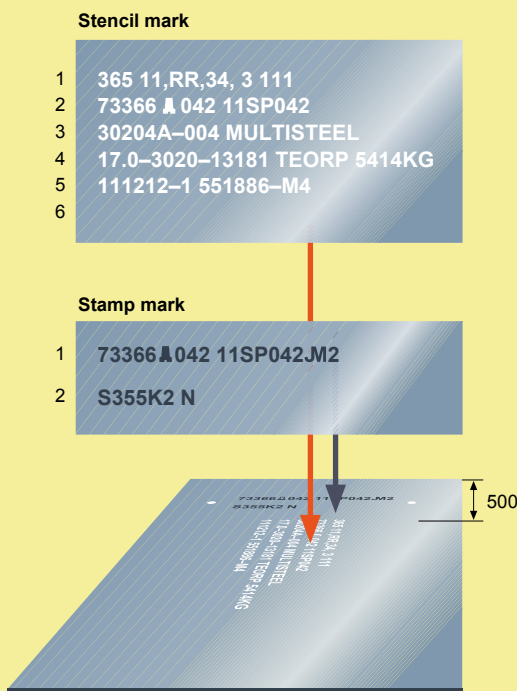
**Stencilling and self-adhesive labels**

In addition to stamping, Ruukki uses stencilling, marker pens, crayons and self-adhesive product labels, figures

6 and 7. Labels are attached to the product at easily readable locations to enhance data transfer to the customer's material management system.

• **Stencil and stamp marks on plates**

Figure 1

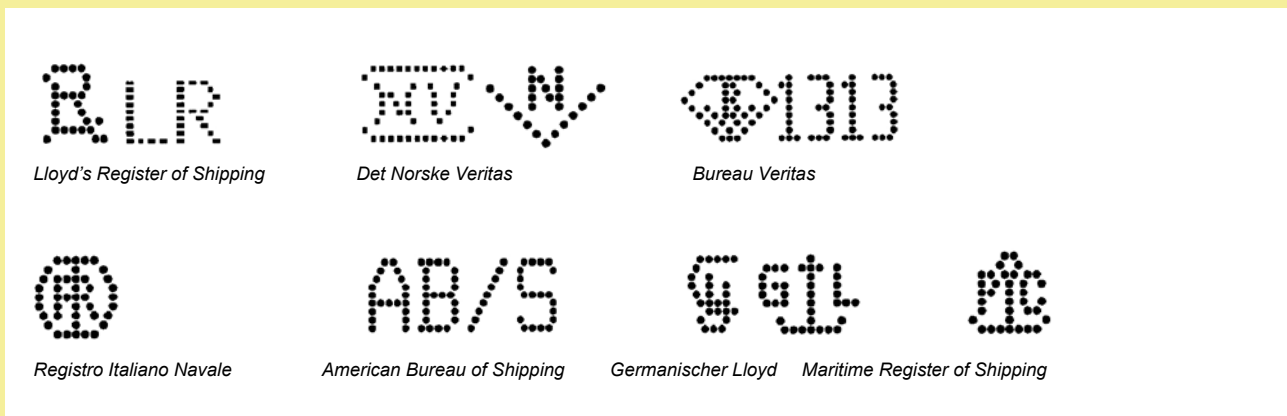


1. Internal marks of the works.
  2. Charge number (73366), the manufacturer's mark of Rautaruukki Corporation, number of the rolled plate (042), number of the delivered plate cut from a rolled plate (11), designation of the test batch (SP) and number of the tested plate (042).
  3. Number of the order confirmation, position number and steel grade.
  4. The thickness, width and length (mm) and theoretical weight (kg) of the plate.
  5. The classification society's mark if required and/or markings required by the customer.
  6. Markings required by the customer.
- Stencilling is applied on the plate in the rolling direction.  
The height of letters in stencilling is 80 mm.

1. Charge number (73366), the manufacturer's mark of Rautaruukki Corporation, number of the rolled plate (042), number of the delivered plate cut from a rolled plate (11), designation of the test batch (SP), number of the tested plate (042) and the manufacturer's inspection stamp.
  2. Steel grade designation.
- Shipbuilding steels are also seen with the classification society's stamp mark. Ultrasonic inspection is verified by a stamp mark.  
The stamp mark is applied on the plate transverse to the rolling direction.  
The height of letters in stamping is 6 – 9 mm.

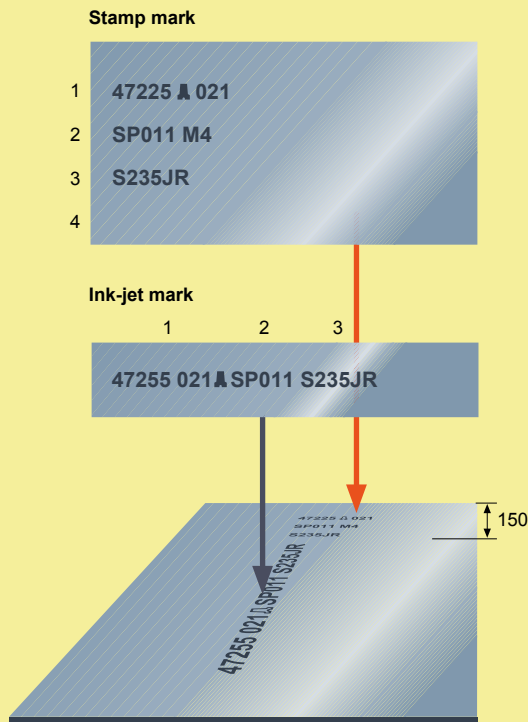
• **Stamp marks of classification societies**

Figure 2



Stamp and ink-jet marks on cut lengths

Figure 3



1. Charge number, the manufacturer's mark of Rautaruukki Corporation and coil number
2. Designation of the test batch (number of the tested coil) and the manufacturer's inspection stamp.
3. Steel grade.
4. Stamp of the receiving classification society or accredited inspection body as required.

The stamp mark is applied on the sheet transverse to the rolling direction. The height of letters in stamping is 8 mm. Information to be marked by stamping may be reduced when so instructed by the customer or required for the steel grade.

1. Number of the cut length (cast and coil numbers) and the manufacturer's mark of Rautaruukki Corporation.
2. Designation of the test batch and steel grade.
3. Steel grade.

The ink-jet mark is applied along the rolling direction. The height of letters in ink-jet marking is 50 mm.

Self-adhesive product label for bundles of cut lengths

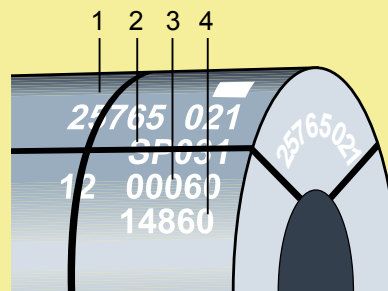
Figure 4

NIMITE / BLADE		PERUSP. / RUUMAS- / PAK. ALUSP. /		TARVA L. / K. M. 6200
TUOTTAJA / <b>RAUTARUUKKI OYJ</b> RUUKKI METALS FIN-04400 JÄRVENPÄÄ, FINLAND		TUOTTEEN NIMI / RAAHE		
TUOTTEEN NIMI / 5767		TUOTTEEN NIMI / RAAHE FINLAND		
TUOTTEEN NIMI / 2925		TUOTTEEN NIMI / 4		
TUOTTEEN NIMI / 2925		TUOTTEEN NIMI / 18623 061 13 SP061 OPTIM 200 MC		
TUOTTEEN NIMI / 1862306113		TUOTTEEN NIMI / 6.00/1500.0/ 10000		
TUOTTEEN NIMI / 061005		TUOTTEEN NIMI / Rautaruukki Oyj Järvenpää		
TUOTTEEN NIMI / 73982 /070 -VCI-PROTECTED		TUOTTEEN NIMI / ORDER INFORMATION NOTEN		

Product labels are attached to bundles of cut lengths. The product label is attached both to the end of a cut length bundle and to one of its long sides.

Stencil marks on coils

Figure 5



1. Coil number (cast and slab numbers)
2. Designation of the test batch
3. Markings needed during manufacturing
4. Coil weight, kg

● **Product label for coils**

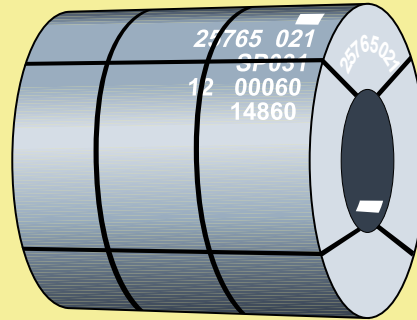
Figure 6



A label is attached to both the inside and outside of the coil.

● **Stencil marks on coils with mill edges**

Figure 7



The product labels are attached on the white areas.  
The markings are applied with a white crayon or black marker pen (pickled product).

**PACKING**

A high-quality, durable packing is an important aspect of Ruukki's products. The packing and protection of steel products are generally specified in the order. As the manufacturer, we reserve the right to specify the most practical packing, protecting, labelling and transport methods for certain product groups, including special steels and pickled strip products. The purpose of this is to safeguard the high quality of our products all the way to their reception by the customer.

● **Plates and cut lengths**

Plates and cut lengths are packed if specifically agreed in the order. We deliver plates as individual plates stacked on top of each other. Cut lengths are delivered as bundles. Dunnage is used as required. Figure 8 shows the packing for a plate.

Paper board is used for manual packing of cut lengths. Translucent polyethylene film is used in automated packing. Dunnage is used in both packing methods as stipulated in the customer's order. Edge protection and other accessories providing support for the packing are used when practical.

● **Coils and slit strip coils**

Coils and slit strip coils as well as coils of patterned plate are delivered as strapped without a rack. Figure 10 shows the packing system.

● **Prefabricated plate products**

**Markings and packing**

We also provide plate products as cut to shape, bent and furnished with welding bevels. The range of prefabricated products also includes wide flats from plates and strip.

Marking of prefabricated plate products complies with the practice applied for plate or strip. Special customer requirements or prefabrication are also taken into account. Prefabricated plate products are packed, supported and covered according to the customer's order and as required by the logistics. Typical methods include packing small plate components on a forklift pallet and packing bent plates on a transport rack.

**Stencilling**

Stencilling complies with the practices applied for plate. In addition, the size and type of finishing of the prefabricated plate product have an effect on the stencilling. The marks are applied manually. The rolling direction of the original plate does not have an effect on the markings on a prefabricated plate product.

**Stamp marking**

Stamping of shop-primed plate plates is carried out at the rolling mill in connection with the manufacturing. The start and end of the stamp field is marked with white paint dots on the shop-primed surface. On wide flats from plates and strip and small plate components,

stamp marks are applied only when required by the customer or if an accredited inspection body or classification society requires such a quality assurance measure.

**Small plate components**

Small prefabricated plate products are packed on a flatbed container, a pallet suitable for forklifts (Fig. 11) or in a box. The max. weight of small plate components is 2000 kg.

**Bent plate products**

Plates bent to shape are loaded on a transport rack with triangular supports under the plates, see Fig. 12.

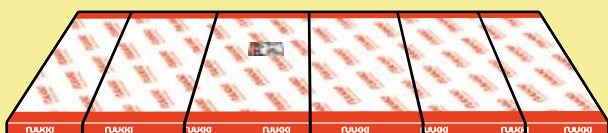
The max. weight of a single bundle is approx. ten (10) tonnes. Lifting points are marked on the plate on top of a bundle. N.B: Transport racks are not lifting gear – it must be the product that is lifted, not the rack. Conditions related to the protection, transport and moving of products are specified in accordance with the delivery conditions agreed in the order.

**Wide flats from plate**

Wide flats from plate are strapped as shown in Figure 13. Four to six straps are generally used, depending on the size of the bundle. The bundle weight is agreed in the order.

• **Packing of a plate**

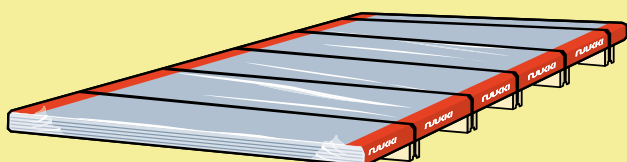
Figure 8



- Self-adhesive product labels
- Packing, paperboard
- Edge protection, heavy-duty cardboard
- Binding strap, metal

• **Automatically packed bundle of cut lengths**

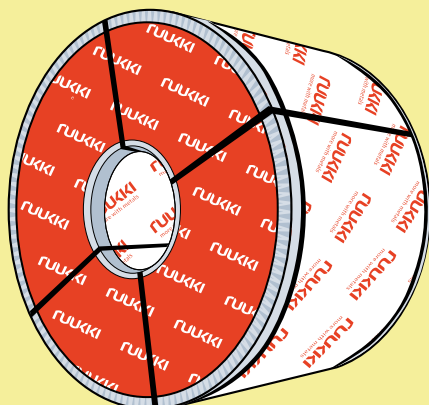
Figure 9



- Self-adhesive product labels
- Packing, translucent polyethylene film
- Edge protection, heavy-duty cardboard
- Binding strap, metal
- Dunnage

• **Packing of coils and slit coils**

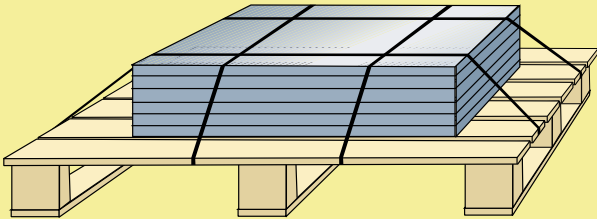
Figure 10



- Self-adhesive product label on the in- and outside
- Packing, paper board
- End disc, plastic
- Edge protection on the in- and outside, metal
- Protective paperboard on the inside
- Binding strap, metal
- If required the outside of the pack is covered with a protective paper or corrugated plastic

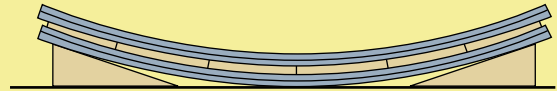
- **Small plate components packed on a forklift pallet**

Figure 11



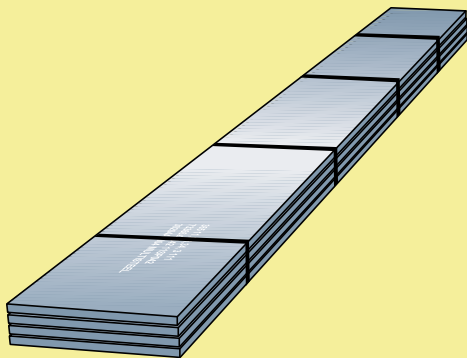
- **Bent tank plates packed on a transport rack**

Figure 12



- **Packing of wide flats from plate**

Figure 13



Information marked by ink-jet on wide flats from plate:

- number of the order confirmation
- position
- charge number., number of the delivered plate cut from a rolled plate and number of the tested plate
- thickness x width x length (mm)
- information required by the customer.

The height of letters in ink-jet marking is 20 mm.

Packs of wide flats from plate are designated with a self-adhesive product label as shown in Fig. 4.

Basic information stamped on wide flats from plate:

- charge number
- number of the delivered plate cut from a rolled plate.

The height of letters in stamping is 6 – 9 mm.

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

Sales, Technical Customer Support

[info.metals@ruukki.com](mailto:info.metals@ruukki.com)

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

[www.ruukki.com](http://www.ruukki.com)

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