

# **Material Marking Methods**

## **Amended Rules and Guidance**

Rules for the Survey and Construction of Steel Ships Part K  
Guidance for the Survey and Construction of Steel Ships Part K

## **Reason for Amendment**

Requirements related to chemical composition analysis and mechanical testing of materials are specified in Part K of the Rules, and materials complying with said requirements are required to be stamped with the Society's brand and their material grade. In addition, in cases where a standard value differing from that specified in Part K is applied, an appropriate suffix is added to the material grade.

Requirements specifying that stamping is the method for marking such materials, however, were established independently by the Society; in other words, they are the Society's own original requirements. In some cases though, the stamping of materials may be difficult for material manufacturers to do and may even interfere with the manufacturing process of such materials.

In light of the above, the Society received a number of requests from relevant industry members asking that marking methods other than stamping be also allowed.

Considering the above requests, relevant requirements were amended so that not only stamping but also other appropriate marking methods (e.g. stenciling) may be used for the marking of material grades and heat treatment information.

## **Outline of Amendment**

Amended the requirements for material marking methods.

“Rules for the survey and construction of steel ships” has been partly amended as follows:

## **Part K        MATERIALS**

### **Chapter 1    GENERAL**

#### **1.5        Marking and Test Certificate**

##### **1.5.1        Marking**

Sub-paragraph -1 has been amended as follows.

**1**    Every materials complying with the requirements is to be clearly stamped with the Society's brand ~~MR~~ including the marks deemed appropriate by the Society ~~and material grade mark~~, and marked with the following particulars in at least one position by the maker.

(1)    Material grade

~~(2)~~    Name or mark to identify the maker.

~~(3)~~    Number or mark to identify the piece.

~~(4)~~    Condition of heat treatment (if **Chapter 3** of this Part applies, except for “as rolled” steel)

~~(5)~~    Name, order number or other identification marks (if required by the purchaser)

## Chapter 3 ROLLED STEELS

### 3.2 Rolled Steel Plates for Boilers

#### 3.2.11 Marking for Accepted Steels\*

Sub-paragraph -1 has been amended as follows.

**1** Steel plates which have satisfactorily complied with the required tests are to be stamped or marked by some other appropriate method with the identification mark relating to heat treatment in addition to the requirements in **1.5.1**.

### 3.3 Rolled Steel Plates for Pressure Vessels

#### 3.3.11 Marking\*

Sub-paragraph -1 has been amended as follows.

**1** Steel plates which have satisfactorily complied with the required tests are to be stamped or marked by some other appropriate method with the identification mark relating to heat treatment in addition to the requirements in **1.5.1**.

### 3.6 Round Bars for Chains

Paragraph 3.6.12 has been amended as follows.

#### 3.6.12 Marking

**1** Chain bars which have proved satisfactory compliance with the required tests are to be marked with identification marks in accordance with the requirements in **1.5.1**.

**2** In the case of chain bars of grades *KSBCR3*, *KSBCR3S*, *KSBCR4*, *KSBCR4S* and *KSBCR5*, the material grade is, in principle, to be stamped onto the bar. However, the material grade may be marked by some other appropriate method in cases where approved by the Society.

## Chapter 5 CASTINGS

### 5.1 Steel Castings

Paragraph 5.1.12 has been amended as follows.

#### 5.1.12 Marking\*

1 (Omitted)

2 The grade of material and the manufacturer's name or trade mark are to be cast ~~or~~ stamped or marked by some other appropriate method on all cast steels. In addition, cast number and test number are to be stamped or marked by some other appropriate method on all cast steels greater than 250 *kg* in weight. The Society's brand indicating satisfactory compliance with the Rule requirements is to be stamped on all cast steels in the neighbourhood of the above mentioned marks.

“Guidance for the survey and construction of steel ships” has been partly amended as follows:

## **Part K MATERIALS**

### **K3 ROLLED STEELS**

#### **K3.2 Rolled Steel Plates for Boilers**

Paragraph K3.2.6 has been amended as follows.

##### **K3.2.6 Selection of Test Samples**

**1** Where the purchasers carry out normalizing specified in **3.2.4-2, Part K of the Rules** at their factories, test samples are to comply with the following requirements:

- (1) The manufacturer is to carry out normalizing of the test sample in accordance with purchaser instructions regarding heat treatment conditions and frequency. Where no instructions have been given by the purchaser, the manufacturer may carry out normalizing as considered preferable. In this case, the manufacturer is to inform the purchaser the conditions of normalizing which had been carried out.
- (2) The mechanical properties obtained by the test specimens specified in (1) above are to comply with the provisions in **Table K3.10, Part K of the Rules**.

**2** The marking related to the heat treatment of the steel plates specified in -1 is to be “TN” in cases where normalizing is carried out for test specimens only.

Paragraph K3.2.11 has been amended as follows.

##### **K3.2.11 Marking for Accepted Steels**

~~===== The markings related to the heat treatment of the steel plates provided in **K3.2.6** are to be “TN” (showing the case where normalizing is carried out for test specimens only).~~

The wording “some other appropriate method” in **3.2.11-1, Part K of the Rules** means stenciling, etc.

#### **3.3 Rolled Steel Plates for Pressure Vessels**

Paragraph K3.3.6 has been amended as follows.

##### **K3.3.6 Selection of Test Samples**

**1** Where the purchasers carry out normalizing or quenching and tempering specified in **3.3.4-4, Part K of the Rules** at their factories, test samples are to comply with the following requirements:

- (1) The manufacturer is to carry out normalizing or quenching and tempering of the test sample in accordance with purchaser instructions regarding heat treatment conditions and frequency. Where no instructions have been given by the purchaser, the manufacturer may carry out normalizing or quenching and tempering as considered preferable. In this case, the manufacturer is to inform the purchaser the conditions of normalizing or quenching and tempering which had been carried out.
- (2) The mechanical properties obtained by the test specimens specified in (1) above are to comply with the requirements specified in **Table K3.13, Part K of the Rules**.

**2** The marking related to the heat treatments of the steel plates specified in -1 is to either be “TN”

in cases where normalizing is carried out for test samples only or “TQ” in cases where quenching and tempering are carried out for test samples only.

Paragraph K3.3.11 has been amended as follows.

### **K3.3.11 Marking**

~~The markings related to the heat treatments of the steel plates specified in K3.3.6 are to be “TN” in cases where normalizing is carried out for test samples only or “TQ” in cases where quenching and tempering are carried out for test samples only.~~

The wording “some other appropriate method” in 3.3.11-1, Part K of the Rules means stenciling, etc.

### **K3.6 Round Bars for Chains**

Paragraph K3.6.12 has been added as follows.

#### **K3.6.12 Marking**

The wording “some other appropriate method” in 3.6.12-2, Part K of the Rules means stenciling, etc.

## **K5 CASTINGS**

### **K5.1 Steel Castings**

Paragraph K5.1.12 has been added as follows.

#### **K5.1.12 Marking**

The wording “some other appropriate method” in 5.1.12-2, Part K of the Rules means stenciling, etc.