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**Hot-rolled mild steel plates, sheet
and strip**

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry, through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by The Japan Iron and Steel Federation (JISF) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS G 3131:2011** is replaced with this Standard.

However, **JIS G 3131:2011** may be applied in the **JIS** mark certification based on the relevant provisions of Article 19 Clause 1, etc. of the Industrial Standardization Law until August 19, 2019.

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Hot-rolled mild steel plates, sheet and strip

Introduction

This Japanese Industrial Standard has been prepared based on **ISO 3573:2012**, Edition 5, with some modifications of the technical contents.

The vertical lines on both sides and dotted underlines indicate changes from the corresponding International Standard. A list of modifications with the explanations is given in Annex JA.

1 Scope

This Standard specifies the requirements for hot-rolled mild steel plates and sheets (hereafter referred to as steel sheets) and hot-rolled mild steel strips (hereafter referred to as steel strips) for commercial and processing qualities.

NOTE The International Standard corresponding to this Standard and the symbol of degree of correspondence are as follows.

ISO 3573:2012 *Hot-rolled carbon steel sheet of commercial and drawing qualities* (MOD)

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and **JIS** are IDT (identical), MOD (modified), and NEQ (not equivalent) according to **ISO/IEC Guide 21-1**.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS G 0320 *Standard test method for heat analysis of steel products*

JIS G 0404 *Steel and steel products—General technical delivery requirements*

JIS G 0415 *Steel and steel products—Inspection documents*

JIS G 3193 *Dimensions, mass and permissible variations of hot rolled steel plates, sheets and strips*

JIS Z 2241 *Metallic materials—Tensile testing—Method of test at room temperature*

JIS Z 2248 *Metallic materials—Bend test*

3 Symbol of grade and applicable thickness

The steel sheet and strip shall be classified into four grades, and their symbols and applicable thicknesses shall be as given in Table 1.

Table 1 Symbols of grade and applicable thicknesses

Symbol of grade	Applicable thickness mm	Application (informative)
SPHC	1.2 or over up to and incl. 14	Commercial quality
SPHD	1.2 or over up to and incl. 14	Processing quality
SPHE	1.2 or over up to and incl. 8	
SPHF	1.4 or over up to and incl. 8	

4 Chemical composition

The steel sheet and strip shall be tested in accordance with 9.1, and the heat analysis values shall be as given in Table 2.

Table 2 Chemical composition

Unit: %

Symbol of grade	C	Mn	P	S
SPHC	0.12 max.	0.60 max.	0.045 max.	0.035 max.
SPHD	0.10 max.	0.45 max.	0.035 max.	0.035 max.
SPHE	0.08 max.	0.40 max.	0.030 max.	0.030 max.
SPHF	0.08 max.	0.35 max.	0.025 max.	0.025 max.
Alloy elements other than those in this table may be added as required.				

5 Mechanical properties

5.1 Tensile strength and elongation

The tensile strength and elongation shall be as follows.

- The steel sheet and strip shall be tested in accordance with 9.2, and their tensile strength and elongation shall be as specified in Table 3.
- The values in Table 3 shall be applied to delivery inspection ¹⁾.

Note ¹⁾ Elongation of steel sheet and strip may decrease due to age hardening.

- The above requirements shall not apply to top and tail ends of rolled steel strip.