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**Steel and steel products—General
technical delivery requirements**

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In the event of any doubts arising as to the contents,
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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 0404:2010** is replaced with this Standard.

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Steel and steel products—General technical delivery requirements

Introduction

This Japanese Industrial Standard has been prepared based on the third edition of **ISO 404** published in 2013 with some modifications of the technical contents.

The portions given dotted underlines are the matters in which the contents of the corresponding International Standard have been modified. A list of modifications with the explanations is given in Annex JA.

1 Scope

This Standard specifies the general technical delivery requirements for steel and steel products as defined in **JIS G 0203** with the exception of steel forgings/castings and powder metallurgical products.

Where the delivery requirements agreed at the time of ordering or those specified in the product standard differ from the requirements specified in this Standard, then it is the requirements agreed for ordering or specified in the product standard that apply.

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

ISO 404:2013 *Steel and steel products—General technical delivery requirements* (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) listed below shall be applied.

JIS G 0203 *Glossary of terms used in iron and steel (Products and quality)*

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

JIS G 0321 *Product analysis and its tolerance for wrought steel*

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

JIS G 0416 *Steel and steel products—Location and preparation of samples and test pieces for mechanical testing*

JIS G 0417 *Steel and iron—Sampling and preparation of samples for the determination of chemical composition*

JIS Q 9001 *Quality management systems—Requirements*

NOTE : Corresponding International Standard: ISO 9001 *Quality management systems—Requirements* (IDT)

JIS Z 8401 Guide to the rounding of numbers

3 Terms and definitions

For the purpose of this Standard, the following terms and definitions and those given in **JIS G 0203** apply.

3.1 inspection

activities such as measuring, examining, testing and gauging one or more characteristics of a product or service and comparing these with specified requirements to verify conformity

3.2 testing

any operation or action to determine one or more properties or characteristics of a material or product

3.3 specific inspection

inspection carried out, before delivery, in accordance with the product specification, on the products being supplied or on the test units of which the products are part, to verify that these products meet the requirements of the order

3.4 inspection representative

one or more individuals among the following:

- a) the manufacturer's authorized inspection representative(s) independent from the manufacturing department;
- b) the purchaser's authorized inspection representative;
- c) the inspector(s) designated by a third party.

3.5 test unit

lot or batch of products to accept or reject together, on the basis of the verification tests carried out on the sample products in accordance with the requirements of the product standard or the order (see figure 1)

3.6 sample product

item (a sheet, for example) selected from a test unit for inspection and/or testing (see figure 1)

3.7 sample

sufficient quantity of material taken from the sample product for the purpose of producing one or more test pieces (see figure 1)

NOTE : In certain cases, the sample may be the sample product itself.

3.8 rough specimen

part of the sample having undergone mechanical treatment, followed by the heat treatment where appropriate, for the purpose of producing test pieces (see figure 1)

3.9 test piece

part of the sample, with specified dimensions, brought to required condition for submission to a given test (see figure 1)

NOTE : In certain cases, the test piece may be the sample itself or the rough specimen itself.

3.10 cast (heat) analysis

chemical analysis representative of the cast (heat) determined by the manufacturer and carried out by the manufacturer according to **JIS** or other documented procedures

Generally, it means the analysis of chemical composition carried out on the analytical samples¹⁾ taken during a series of processes in which the molten steel is poured into the mould from a ladle, then solidified.

Note ¹⁾ Where it is not feasible to obtain the analytical sample from the molten steel, such as in vacuum arc remelting method (VAR), electro-slag remelting method (ESR) or other method, the analysis shall be carried out on analytical samples taken from steel ingot, steel slab, or steel material, and the results are applied to the cast analysis.

3.11 product analysis

a chemical analysis carried out on the product

3.12 sequential testing

a series of tests from which the average and/or individual test results are obtained to demonstrate that the requirements of the purchaser and/or the product standard have been satisfied

3.13 manufacturer

organization that manufactures products according to the requirements of the order and the related product specifications

3.14 intermediary

organization that is supplied with products by the manufacturers and that then, in turn, supplies them without further processing or after performing processing such as cutting without changing the properties specified in the purchase order and referenced product specification

NOTE : Examples of intermediaries can be steel service centres and stockists.

3.15 processor

organization that is supplied with products by the manufacturer, and that then, performs the required processing on those products

NOTE : See clause 6 for handling of inspection documents to be supplied by the manufacturer and additional documents by the processor.

4 Information to be supplied by the purchaser

4.1 The purchaser shall select the type of steel, the shape and dimensions of the product by taking the intended processing and the application into account. The purchaser may consider the manufacturer's advice in making the choice.

The purchaser shall provide all the information necessary for describing the product and its characteristics, and also details concerning delivery exemplified as:

- a) mass, length, area and quantity of products to be delivered;
- b) product shape (it can be a number referring to a drawing, for example);
- c) nominal dimensions;
- d) tolerances on the characteristics in items of **a)** and **c)**;
- e) symbol of type of steel;
- f) delivery condition (type of heat treatment, surface treatment, etc.);
- g) specific requirements for surface quality and/or internal quality;
- h) where not specified in the product standard, the type of inspection document and the inspection and testing requirements;
- i) when the quality management system given in **JIS Q 9001** is applied, the standard number thereof;
- j) requirements for marking, packing and loading;
- k) any optional (supplementary) requirements provided for by the product standard.

4.2 The information in **4.1** shall be specified in accordance with the following.

- a) It shall be specified by reference to one or more of Japanese Industrial Standards;
- b) In the absence of Japanese Industrial Standard, it shall be specified by stipulation of the characteristics and conditions required;
- c) If, in an order, reference is made to a given Japanese Industrial Standard without specifying the edition date (year of publication), this reference interpreted as being the edition current at the date of the order acknowledgement shall be applied; in the special case where reference is made to a Japanese Industrial Standard by specifying the edition (year of publication), the edition to be applied shall be upon the agreement between the purchaser and the manufacturer.