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Carbon steel tubes for machine structure

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Foreword

This Japanese Industrial Standard has been 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 a draft being attached, based on the provision of Article 12, paragraph (1) of the Industrial Standardization Act applied *mutatis mutandis* pursuant to the provision of Article 16 of the said Act. This edition replaces the previous edition (**JIS G 3445 : 2016**), which has been technically revised.

However, **JIS G 3445 : 2016** may be applied in the **JIS** mark certification based on the relevant provisions of Article 30, paragraph (1), etc. of the Industrial Standardization Act until 21 February 2022.

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Carbon steel tubes for machine structure

1 Scope

This Japanese Industrial Standard specifies requirements for carbon steel tubes (hereafter referred to as tubes) used for machinery, automobiles, bicycles, furniture, appliances and other machine parts.

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 0321 *Product analysis and its tolerance for wrought steel*

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

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

JIS G 3302 *Hot-dip zinc-coated steel sheet and strip*

JIS G 3313 *Electrolytic zinc-coated steel sheet and strip*

JIS G 3314 *Hot-dip aluminium-coated steel sheet and strip*

JIS G 3317 *Hot-dip zinc-5 % aluminium alloy-coated steel sheet and strip*

JIS G 3321 *Hot-dip 55 % aluminium-zinc alloy-coated steel sheet and strip*

JIS G 3323 *Hot-dip zinc-aluminium-magnesium alloy-coated steel sheet and strip*

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

JIS Z 8401 *Rounding of numbers*

3 Symbol of grade

The tubes are classified into 22 grades, and the symbol of grade shall be as given in Table 1.

4 Manufacturing method

The manufacturing method shall be as follows.

- a) The tubes shall be manufactured by combination of the tube manufacturing method and the finishing method which are indicated in Table 1. The symbol for manufacturing method shall be as specified in Table 1. If required, tubes may be subjected to an appropriate heat treatment.