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**High strength chromium-molybdenum
and chromium-molybdenum-vanadium
alloy steel plates for pressure vessels
under high-temperature service**

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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 4110 : 2015**), which has been technically revised.

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High strength chromium-molybdenum and chromium-molybdenum-vanadium alloy steel plates for pressure vessels under high-temperature service

Introduction

This Japanese Industrial Standard has been prepared based on **ISO 9328-1** : 2018, Edition 4, and **ISO 9328-2** : 2018, Edition 4, 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 requirements for the hot-rolled high strength chromium-molybdenum and chromium-molybdenum-vanadium alloy steel plates for pressure vessels used under the high-temperature service (hereafter referred to as steel plates).

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

ISO 9328-1 : 2018 *Steel flat products for pressure purposes — Technical delivery conditions — Part 1 : General requirements*

ISO 9328-2 : 2018 *Steel flat products for pressure purposes — Technical delivery conditions — Part 2 : Non-alloy and alloy steels with specified elevated temperature properties* (Overall evaluation : MOD)

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standards 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 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 3193 *Dimensions, shape, mass and permissible variations of hot rolled steel*