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Cranes — Wind load assessment

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In the event of any doubts arising as to the contents,
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Foreword

This Japanese Industrial Standard has been revised by the Minister of Health, Labour and Welfare and 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 Japan Crane Association (JCA)/Japanese Standards Association (JSA) 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 B 8830 : 2001**), which has been technically revised.

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Cranes — Wind load assessment

Introduction

This Japanese Industrial Standard has been prepared based on **ISO 4302** : 2016, Edition 2, with some modifications of the technical contents, in order to align the wind load calculation method with the actual practice in Japan.

Annex JA is unique to **JIS** and not given in the corresponding International Standard. The vertical lines on both sides and dotted underlines indicate changes from the corresponding International Standard. A list of technical deviations with the explanations is given in Annex JB.

1 Scope

This Standard specifies the assessment method for wind loads on all cranes specified in **JIS B 0146** (all parts).

It specifies the methods for calculating wind loads (conditions for in-service and out-of-service) which are included in the loads and the load combinations specified in **JIS B 8831** and **JIS B 8833-1** and are used for proof of competence specified in **JIS B 8821** and **JIS B 8829**.

It provides a simplified method for calculation and assessment and assumes that:

- the wind may blow horizontally from any direction;
- the wind blows at a constant speed; and,
- there is a static reaction to the wind load applied to the crane structure and suspended load.

In addition, this Standard specifies the method for making assessments using an identical method across all domestic regions according to the actual practice in Japan as the “general assessment method”. The assessment method specified in the corresponding International Standard is specified as the “assessment method by application type of crane and geographical region” (see Table 4) (hereafter referred to as assessment method by type and region) which is used to make assessments by the types of cranes exposed to the wind and reference storm wind speeds in respective domestic regions.

The assessment method by type and region of this Standard includes built-in allowances for the effects of gusting (fluctuation in wind speed) and for dynamic response.

It also gives guidance on when to secure the crane for out-of-service conditions.

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

ISO 4302 : 2016 *Cranes — Wind load assessment* (MOD)

In addition, symbols which denote the degree of correspondence in the