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**Rolling bearings—Thermal speed
rating—Calculation**

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Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee according to the proposal for establishment of Japanese Industrial Standard submitted by the Japan Bearing Industrial Association (JBIA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law.

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Rolling bearings—Thermal speed rating—Calculation

Introduction

This Japanese Industrial Standard has been prepared based on the first edition of **ISO 15312** published in 2003 without any modifications of the technical contents and the structure.

The portions underlined with dots are the matters not given in the corresponding International Standard.

1 Scope

This Standard defines the thermal speed rating for rolling bearings and calculation principles. The parameter determined in accordance with this Standard applies to rolling bearings of the given series and sizes of standard design specified in **JIS B 1511** or of a design that, from a frictional point of view, can be related to a standard design bearing.

Thrust ball bearings are excluded from this Standard as kinematic effects do not allow the thermal speed rating defined in this Standard to be applied.

NOTE 1 In Annex A mean values for coefficient f_{0r} for calculation of the load-independent frictional moment and coefficient f_{1r} for calculation of the load-dependent frictional moment under reference conditions in clause 5 are given.

NOTE 2 In Annex B the reference conditions for grease lubrication are defined. The reference are chosen such that the thermal speed rating for grease lubrication is identical to that for oil bath lubrication.

NOTE 3 The International Standard corresponding to this Standard and the symbol of degree of correspondence are as follows:

ISO 15312:2003 *Rolling bearings—Thermal speed rating—Calculation and coefficients* (IDT)

The 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 B 0104 *Rolling bearings—Vocabulary*

NOTE : Corresponding International Standard: ISO 5593:1997 *Rolling bearings—Vocabulary* (MOD)