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(JGMA/JSA)

Cylindrical gears—ISO system of flank tolerance classification—Part 1: Definitions and allowable values of deviations relevant to flanks of gear teeth

ICS 21.200

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In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

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Contents

Page

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 Japan Gear Manufacturers Association (JGMA)/Japanese Standards Association (JSA) 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 B 1702-1** : 1998 is replaced with this Standard.

Attention is drawn to the possibility that some parts of this Standard may conflict with patent rights, applications for a patent after opening to the public or utility model rights. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying any of such patent rights, applications for a patent after opening to the public or utility model rights.

JIS B 1702 series consists of the following 3 parts:

JIS B 1702-1 *Cylindrical gears—ISO system of flank tolerance classification—Part 1: Definitions and allowable values of deviations relevant to flanks of gear teeth*

JIS B 1702-2 *Cylindrical gears—ISO system of accuracy—Part 2: Definitions and allowable values of deviations relevant to radial composite deviations and runout information*

JIS B 1702-3 *Cylindrical gears—The accuracy—Part 3: Definitions and allowable values of deviations relevant to corresponding flanks of the gear teeth and radial composite deviations of injection molding plastic gears*

Cylindrical gears—ISO system of flank tolerance classification—Part 1: Definitions and allowable values of deviations relevant to flanks of gear teeth

Introduction

This Japanese Industrial Standard has been prepared based on the second edition of **ISO 1328-1** published in 2013 with some modifications of the technical contents to reflect the actualities in Japan.

The portions given sidelines or 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 establishes a tolerance classification system relevant to manufacturing and conformity assessment of tooth flanks of individual cylindrical involute gears. It specifies definitions for gear flank tolerance terms, the structure of the flank tolerance class system, and allowable values. Eleven flank tolerance classes are defined, numbered 1 to 11. Formulae for tolerances are provided in **6.3**. These tolerances are applicable to the following ranges:

— $5 \leq z \leq 1\,000$

— $5 \text{ mm} \leq d \leq 15\,000 \text{ mm}$

— $0.5 \text{ mm} \leq m_n \leq 70 \text{ mm}$

— $4 \text{ mm} \leq b \leq 1\,200 \text{ mm}$

— $\beta \leq 45°$

where,

d is the reference diameter (see **JIS B 0102-1**);

m_n is the normal module;

b is the facewidth (axial);

z is the number of teeth;

β is the helix angle.

Surface texture is not considered in this Standard. For additional information on surface texture, see **ISO/TR 10064-4**.

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

ISO 1328-1 : 2013 *Cylindrical gears—ISO system of flank tolerance classification—Part 1: Definitions and allowable values of deviations relevant to flanks of gear teeth* (MOD)