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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 10225-2025

Replacing GB/T 10225-1988

Accuracy of fine-pitch bevel gears

小模数锥齿轮精度

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. This document replaces GB/T 10225-1988 "Precision of Small Module Bevel Gears". Compared with GB 10225-1988, except for structural adjustments and coding... Aside from the logical changes, the main technical changes are as follows:

- a) The scope has been changed (see Chapter 1, Chapter 1 of the 1988 edition);
- b) Terms and definitions have been changed (see Chapter 3, Chapter 3 of the 1988 edition);
- c) The requirements regarding the composition of precision units have been changed, the provisions regarding tolerance groups have been deleted, and measurement requirements for precision deviation items have been added (see...). Chapter 4 (Chapter 4 of the 1988 edition);

d) The requirements for accuracy grades and the format of accuracy markings have been changed, and the requirements for gear blanks have been removed (see Chapter 5, Chapter 5 of the 1988 edition);

e) The formula for calculating the tolerance value of the accuracy class and the rounding rules have been changed (see Chapter 6, Chapter 4 of the 1988 edition). Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed and is under the jurisdiction of the National Technical Committee on Gear Standardization (SAC/TC52). This document was drafted by: Zhengzhou Machinery Research Institute (Zhengzhou) Transmission Technology Co., Ltd., and Zhengzhou Machinery Research Institute Co., Ltd., China Academy of Machinery Science and Technology Group Corporation, Zhejiang Fengli Intelligent Technology Co., Ltd., Zhejiang Jiezhong Technology Co., Ltd., Shenzhen Zhaowei Electromechanical Co., Ltd., Xi'an Lei Shooting Transmission Technology Co., Ltd., Tianjin Jinyan Transmission Equipment Co., Ltd., Chongqing University, Henan University of Science and Technology, Zhongshan Mairer CNC Technology Co., Ltd. The company, Shenzhen Shunli Motor Co., Ltd., Northwestern Polytechnical University, and Chang'an University. The main drafters of this document are. Wang Zhigang, Wang Youli, Xu Yingjie, Fan Ruili, Wang Junheng, Sun Kun, Zhao Ning, Cao Zhigang, Jiang Chuang, and Yu Yongwang. Wang Dongfei, Zhou Mingyong, Guo Hui, Wang Yunqi, Sun Xia, Xin Dong, Guan Rongxin, Wei Bingyang, Shi Lubing, Song Chaosheng, Zhao Xuhe, Xu Wenbo, Pei Bang Dong Zuyan, Yan Yaolong, Guo Qingqing, Guan Hongjie, Yan Hongxiang, Zhi Yanfeng, Lin Xin, Sun Linlin, Yu Feipeng, Hou Nai, Nie Shaowu. This document was first published in 1988, and this is its first revision. Small module bevel gear precision Important

Note. Familiarity with the contents of GB/T 11365 and GB /Z 18620.6 is essential for the use of this document.

1 Scope

GB/T 10225-2025 is the Chinese national standard on accuracy of fine-pitch bevel gears, in the field of mechanical systems and components. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 2 December 2025 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 July 2026. Classification: ICS 21.200, CCS J17. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the deviation items, deviation measurement, accuracy grade, and

tolerance requirements for the accuracy of individual small-module bevel gears (including hypoid gears). Calculate the tolerance value. This document applies to the following.

--- $0.2\text{mm} \leq m_m < 1\text{mm}$;

--- $5\text{mm} \leq d_T \leq 200\text{mm}$. in. m_m

--- Midpoint normal modulus; z

--- Number of teeth; d_T

--- Tolerance reference diameter.

Note. The precision grade of the gear obtained from this document does not have a direct correlation with the actual performance of the gear in use.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 2821 Gear Geometric Element Designations

GB/T 3374.1 Gears - Terminology and Definitions - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 2821, GB/T 3374.1 and GB /Z 18620.3 apply to this document.

3.1 Single pitch deviation On the same measuring circle, when the probe moves from a point on any tooth surface to a point on an adjacent tooth surface on the same side, the actual tooth surface relative to its theoretical position... Offset. [Source: GB/T 11365-2019, 3.1.7]

3.2 F_p For a given left or right tooth surface, the maximum algebraic difference between any two graduation deviations, regardless of the reading direction or algebraic sign.