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

GB/T 1151-2023

Replacing GB/T 1151-2012

**Internal combustion engines - Main and connecting rod
bearings - Specifications**

内燃机 主轴瓦及连杆轴瓦 技术条件

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Foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules for Standardization Documents" drafting: This document replaces GB/T 1151-2012 "Technical Conditions for Internal Combustion Engine Main Bearings and Connecting Rod Bearings", and is consistent with GB/T 1151-2012 In addition to structural adjustments and editorial changes, the main technical changes are as follows:

- a) Changed the material requirements (see 5:2, 5:2 of the:2012 edition);
- b) Change the hardness requirements (see 5:3, 5:2:1 of the:2012 edition);
- c) Added metallographic structure requirements (see 5:4);
- d) Changed the dimensional tolerances and shape and position tolerances (see 5:5, 5:3 of the:2012 edition);
- e) Changed the surface roughness requirements (see 5:6, 5:4 of the:2012 edition);
- f) Changed the bonding strength requirements (see 5:7, 5:5 of the:2012 edition);
- g) Changed the appearance quality requirements (see 5:8, 5:6 of the:2012 edition);
- h) Increased cleanliness requirements (see 5:9);
- i) The inspection method has been changed (see Chapter 6, Chapter 6 of the:2012 edition);
- j) The inspection rules have been changed (see Chapter 7, Chapter 7 of the:2012 edition);
- k) The marking, packaging, transportation and storage have been changed (see Chapter 8, Chapter 8 of the:2012 edition): Please note that some contents of this document may refer to patents: The issuing agency of this document assumes no responsibility for identifying

patents: This document is proposed by China Machinery Industry Federation: This document is under the jurisdiction of the National Internal Combustion Engine Standardization Technical Committee (SAC/TC177): This document is drafted by: Kunming Yunnei Power Co., Ltd., Shandong Yunnei Power Co., Ltd., Guangxi Yuchai Machinery Co., Ltd: Co., Ltd., Shanghai Motor Vehicle Inspection and Certification Technology Research Center Co., Ltd., Yantai Dafeng Bearing Co., Ltd., Kunming University of Science and Technology: The main drafters of this document: Chen Liqiong, Yuan Honglei, Sun Ridong, Guo Hua, Lu Yintao, Qin Xingnian, Deng Wei, Wang Hailiang, Li Sha, Lei Jilin, Zhang Jin, Yao Guoguo, Liu Jianyong, Su Shengshan, Qin Liming: This document was first published in 1982, revised for the first time in:1993, revised for the second time in:2012, and this is the third revision: Specifications for main bearing bushes and connecting rod bearing bushes of internal combustion engines

1 Scope

GB/T 1151-2023 is the Chinese national standard on internal combustion engines - main and connecting rod bearings - specifications, in the field of energy and heat transfer engineering. 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 23 May 2023 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 December 2023. Classification: ICS 27.020, CCS J92. 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 structure and dimensions, technical requirements, inspection methods, inspection rules and signs, package Packing, transportation and storage: This document is applicable to reciprocating piston internal combustion engines (except for low-speed engines) with flangeless, thin-walled main Rod bearing bush (hereinafter referred to as bearing bush):

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to this document:

GB/T 191 Packaging, storage and transportation icon marks GB/T 231: