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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 8122-2024

Replacing GB/T 8122-2004

Bore dial indicator

内径指示表

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Foreword

This document is in accordance with the rules 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 8122-2004 "Inside Diameter Indicator Table": Compared with GB/T 8122-2004, except for structural adjustments and editorial changes, In addition to the above, the main technical changes are as follows:

- Changed the scope of application of the standard (see Chapter 1, Chapter 1 of the:2004 edition);

- Changed the relevant terms (see Chapter 3, Chapter 3 of the:2004 edition);

- Changed the type and basic parameters of the inner diameter indicator (see Chapter 4, Chapter 4 of the:2004 edition);

- Changed the surface condition requirements of the measuring surface and the positioning surface of the positioning bridge (see 5:4, 5:3 of the:2004 edition);

- Changed the values of the movable probe measuring force and the positioning bridge contact force (see 5:5, 5:5 of the:2004 edition);

- Changed the error items and added the requirements for digital bore gauges (see 5:6, 5:4 of the:2004 edition);

- Increased the requirements for inspection conditions (see Chapter 6);

- Changed the inspection method of centering error (see 7:6, 6:3 of the:2004 edition);

- Changed the indication error test method (see 7:7, 6:1 of the:2004 edition);

- Changed the repeatability test method (see 7:8, 6:2 of the:2004 edition);

- Add requirements for calibration ring gauge (see 7:8):

Please note that some of the contents of this document may involve patents: The issuing organization of this document does not assume the responsibility for identifying patents:

This document was proposed by the China Machinery Industry Federation:

This document is under the jurisdiction of the National Technical Committee for Standardization of Measuring Tools and Instruments (SAC/TC132):

This document was drafted by: Guilin Measuring Tools and Blades Co:, Ltd:, Chengdu Tool Research Institute Co:, Ltd:, Guilin Guanglu Digital Measurement and Control Co:, Ltd:

Company, Chengdu Xincheng Measuring Tools Co:, Ltd:, Harbin Measuring Tools and Cutting Tools Group Co:, Ltd:, Qinghai Measuring Tools and Cutting Tools Co:, Ltd:, Qingliang Technology (Shenzhen) Co:, Ltd:, Weihai Xinwei Measuring Tool Co:, Ltd:, Shanghai Zijiulang Co:, Ltd:, and Suzhou Guoliang Measuring Tool Technology Co:, Ltd:

The main drafters of this document are: Wei Gaihong, Zhao Weirong, Xu Gang, He Yixian, Huang Zhichao, Zhang Wenyou, Li Hua, Zhang Wei, Wei Jianguo, Ma Shibin, Sun Yunchen,

Che Zhaoping, Xia Xiansen, Zhao Yonghai:

This document was first issued in 1987, revised for the first time in:2004, and this is the second revision: Inner diameter indicator

1 Scope

This document specifies the types and basic parameters, requirements, inspection conditions, inspection methods, marking and packaging of bore indicator gauges:

This document is applicable to pointers and digital instruments with a graduation value or resolution of 0:01mm, 0:001mm and a measuring range of 6mm~1000mm:

Design, manufacture and inspection of internal diameter indicator gauges with display readings:

2 Normative references

GB/T 1219

GB/T 17163

GB/T 17164

GB/T 18761

GB/T 24634

3 Terms and definitions

The terms and definitions defined in GB/T 17163, GB/T 17164 and GB/T 24634 and the following apply to this document: 3:1 The mechanical transmission system is used to convert the linear displacement of the movable probe into the angular displacement of the pointer on the circular disk, and the circular disk is used to read the angular displacement:

Internal dimension measuring instrument:

Note: The graduation value is 0:01mm, which is called the internal diameter dial indicator; the graduation value is 0:001mm, which is called the internal diameter micrometer: 3:2 The mechanical transmission system is used to convert the linear displacement of the active probe into the linear (or angular) displacement of the sensor, and the electronic digital display technology is used to display the linear displacement of the active probe:

An internal dimension measuring instrument that displays the readings:

Note: The digital internal diameter dial indicator has a resolution of 0:01 mm, and the digital internal diameter micrometer has a resolution of 0:001 mm: 3:3 repeatability When the internal diameter indicator is used to measure the same object multiple times, the indicator

swings back and forth (and the movable probe is extended to a fully relaxed state) to find the When the turning point is reached, the pointer of the indicator (or displayed value) measures the maximum change of the value measured at the minimum turning point multiple times: 3:4 Central error During measurement, the diameter of the inner diameter indicator is determined by the connection between the movable probe and the interchangeable probe when the positioning bridge is positioned:

The error caused by the diameter: