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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 6472-2023

Replacing GB/T 6472-1996

Vertical internal broaching machines - Testing of the accuracy

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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 6472-1996 "Accuracy Inspection of Vertical Internal Broaching Machines". Compared with GB/T 6472-1996, except for structural adjustments

In addition to editorial changes, the main technical changes are as follows.

a) The applicable limit of rated tensile force is deleted from the range (see Chapter 1, Chapter 1 of the.1996 edition);

b) Added a "Terms and Definitions" chapter (see Chapter 3);

c) Added coordinate axes and changed the typical example diagram of the "pull-down type" vertical internal broaching machine (see Chapter 4, Chapter 4 of the.1996 edition);

d) Change "Brief Description" to "General Requirements", change the description of relevant content, and add requirements for inspection tools and uninspected shafts.

beg. (See Chapter 5, Chapter 3 of the.1996 edition);

e) A new type of "top-pull" broaching machine has been added to the vertical internal broaching machine (see Chapter 4);

f) The simplified diagrams, inspection tools and inspection methods in the geometric accuracy inspection items have been changed (see Chapter 6, 5.2 of the.1996 edition);

g) Deleted the level inspection G01 (see Chapter 5, 5.1 of the.1996 edition);

h) The inspection item "Parallelism of the axis of the G5 main tool chuck hole and its movement (Z-axis)" has been added (see item G5 in Chapter 6);

i) Added "Working Accuracy Inspection" (see Chapter 7);

This document is equivalent to ISO 6779.2019 "Accuracy Inspection of Inspection Conditions for Vertical Internal Broaching Machines".

This document has made the following minimal editorial changes.

---Change the name of the standard to "Accuracy Inspection of Vertical Internal Broaching Machines";

---Deleted the French part of the indexing number description;

---Deleted Appendix A of ISO 6479.2019.

Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents.

1 Scope

This document specifies the geometric accuracy inspection and working accuracy of vertical internal broaching machines with a vertical Z-axis providing the main cutting movement.

test.

This document specifies the tolerances applicable to ordinary precision vertical internal broaching machines corresponding to the above inspections.

This document explains the concept, configuration and characteristics of vertical internal broaching machines and provides relevant terminology and axis names.

This document is only applicable to the accuracy inspection of vertical internal broaching machines, and is not applicable to the operation inspection of vertical internal broaching machines (such as vibration, abnormal noise, operation

(such as crawling inspection of moving parts) and parameter inspection (such as speed, feed rate, etc. inspection). These inspections are usually performed before the accuracy inspection of the vertical internal broaching machine.

conduct.

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, the dated quotations

For undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to

this document.

ISO 230-1.2012 General principles for inspection of machine tools Part 1.Geometric accuracy of machine tools under no-load or quasi-static conditions (Testcode

conditions)

Note. GB/T 17421.1-2023 General principles for inspection of machine tools Part 1.Geometric accuracy of machine tools under no-load or quasi-static conditions (ISO 230-1.

2012,IDT)

3 Terms and definitions

The terms and definitions defined in ISO 230-1 and the following apply to this document.

3.1

A machining process in which a broach is pushed or pulled through a through hole to remove material in a linear cut.

3.2

broach broach

A cutting tool with multiple transverse cutting edges, each cutting edge having an increasing cutting size.

3.3

broachingmachine

Machine tools for broaching.

3.4

A vertical broaching machine that pushes or pulls a broach through a through hole inside a workpiece to remove material.

Note. A vertical broaching machine refers to a broaching machine whose main cutting axis (Z-axis) moves in the vertical direction.