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

**GB/T 6473-2023**

Replacing GB/T 6473-1996

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**Vertical surface broaching machines - Testing of the accuracy**

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## Table of Contents

|                                 |    |
|---------------------------------|----|
| Preface                         |    |
| 1 Scope                         | 1  |
| 2 Normative reference documents | 1  |
| 3 Terms and Definitions         | 1  |
| 4 Part and axis naming          | 1  |
| 5 General requirements          | 2  |
| 5.1 Unit of measurement         | 2  |
| 5.2 Implementation Standard     | 2  |
| 5.3 Inspection sequence         | 3  |
| 5.4 Inspection item             | 3  |
| 5.5 Tolerance                   | 3  |
| 5.6 Inspection Tools            | 3  |
| 5.7 Diagram                     | 3  |
| 5.8 Untested axis               | 3  |
| 6 Geometric accuracy inspection | 3  |
| 7 Work accuracy inspection      | 11 |

## 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 6473-1996 "Accuracy Inspection of Vertical External Broaching Machines". Compared with GB/T 6473-1996, except for structural adjustments

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

---The applicable limits on rated pulling force have been deleted from the scope (see Chapter 1, Chapter 1 of the.1996 edition);

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

---Change "Brief Description" to "General Requirements", and change the description of relevant content, adding inspection tools, simplified diagrams and uninspected

Shaft requirements (see Chapter 5, Chapter 3 of the.1996 edition);

- Changed the diagrams, inspection tools and inspection methods in the geometric accuracy inspection items (see Chapter 6, 5.2 of the.1996 edition);
- Deleted the level inspection G01 (see Chapter 5, 5.1 of the.1996 edition);
- Combined inspection items G2 and G3 into one item, and changed the tolerances (see G2 in Chapter 6, G2 and G3 in.1996 edition 5.2);
- Added "Working Accuracy Inspection" (see Chapter 7).

This document is equivalent to ISO 6481.2019 "Accuracy Inspection of Vertical External Broaching Machine Inspection Conditions".

This document has made the following minimal editorial changes.

- In order to coordinate with the existing standards, the name of the standard is changed to "Accuracy Inspection of Vertical External Broaching Machines";
- Deleted Appendix A of ISO 6481.2019.

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 stipulates the component and axis naming, geometric accuracy inspection and working accuracy inspection of ordinary precision vertical external broaching machines, as well as the corresponding public

Poor requirements and so on.

This document is applicable to the accuracy inspection of vertical external broaching machines. It is not applicable to the operation inspection of vertical external broaching machines (such as vibration, abnormal noise, movement

Parts crawling, etc. inspection) and parameter inspection (such as speed, feed amount, etc. inspection).

## 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.

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 GB/T 17421.1-2023 and the following apply to this document.

NOTE. Terminology used for standardization can be found at the following ISO and IEC database addresses.

#### 3.1

A machining process in which a broach is pushed or pulled across an outer surface to remove material in a linear cut.

Note. The main cutting motion is the relative translation of the broach relative to the non-rotating workpiece, where the cutting force is generated by the motion of the broach or the workpiece.

#### 3.2

broach broach

A cutting tool with multiple transverse cutting edges, each of increasing size.

#### 3.3

broaching machine

Machine tools for broaching.

#### 3.4

A vertical broaching machine that pushes or pulls a broach across the outer surface of a workpiece to remove material.

Note. A vertical broaching machine is a broaching machine whose main cutting axis (Z-axis) has vertical cutting motion.

### 4 Part and axis naming

The nomenclature of the components and axes of the vertical external broaching machine is shown in the typical example in Figure 1.