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

GB/T 14404-2024

Replacing GB/T 14404-2011

Plate shear - Testing of the accuracy

剪板机 精度

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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 is required. This document replaces GB/T 14404-2011 "Shearing Machine Accuracy". Compared with GB/T 14404-2011, except for structural adjustment and compilation In addition to logical changes, the main technical changes are as follows: The general requirements have been changed (see 4.1,

3.1 of the.2011 edition); - Changed the inspection conditions for working accuracy (see 4.2, 3.2 of the.2011 edition); - The uniformity tolerance requirements and test methods of blade edge clearance have been changed (see 5.1.1,

4.1.1 of the.2011 edition); - Changed the tolerance requirements and inspection methods for the parallelism of the lower blade and the material stopper (see 5.1.2,

4.1.2 of the.2011 edition); - Changed the tolerance requirement for the parallelism of the vertical support surface that fits the lower blade to the upper tool holder stroke (see 5.1.3,.2011 edition) 4.1.3); Changed the tolerance requirement for the parallelism of the vertical support surface that fits the upper blade to the upper tool holder travel (see 5.1.4,.2011 edition) 4.1.4); Increased the positioning accuracy and repeatability requirements for CNC stoppers (see 5.2); - The straightness requirements of the test piece have been changed (see 5.3.1,

4.2.1 of the.2011 edition); - The requirements for parallelism of the test piece have been

changed (see 5.3.2,

4.2.2 of the 2011 edition). - 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 Forging Machinery Standardization Technical Committee (SAC/TC 220). This document was drafted by: Nanjing Forestry University, Ruitie Machine Tool (Suzhou) Co., Ltd., Anhui Yawei Machine Tool Manufacturing Co., Ltd., Taian Hualu Forging Machine Tool Co., Ltd., Huace Testing & Certification Group Co., Ltd., Jinan Yigao CNC Machinery Co., Ltd., Jinan Foundry and Forging Institute Inspection and Testing Technology Co., Ltd., Rongcheng Huadong Forging Machine Tool Co., Ltd. The main drafters of this document are: Li Zhong, Li Zhenguang, Zhang Xiaoping, Liang Tao, Cui Zhaoyan, Wan Feng, Qiu Zhenyu, Su Yi, Ni Chao, Li Naizhou, Ma Liqiang and Qiu Yuliang. The previous versions of this document and the documents it replaces are as follows: First published in 1993 as GB/T 14404-1993, first revised in 2011; - This is the second revision. - Shearing machine accuracy

1 Scope

GB/T 14404-2024 is the Chinese national standard on plate shear - testing of the accuracy, in the field of manufacturing 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 28 November 2024 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 June 2025. Classification: ICS 25.120.10, CCS J62. 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 precision inspection requirements, accuracy requirements and inspection methods for shearing machines. This document applies to general purpose shears.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies. in this document.

GB/T 8170 Rules for rounding off values and expression and determination of limit values

GB/T 10923-2009 General rules for precision inspection of forging machinery

GB/T 36484 Terminology of forging machinery

JB/T 1826.1 Shearing machine terminology

3 Terms and definitions

The terms and definitions defined in GB/T 36484 and JB/T 1826.1 apply to this document.

4.1 General requirements

4.1.1 The test conditions shall be that the power supply voltage deviation is within the range of $\pm 10\%$ and the ambient temperature is within the range of 5°C to 40°C .

4.1.2 Before the precision test, the installation level should be adjusted. A level gauge should be placed in the middle of the workbench along the longitudinal and transverse directions of the shearing machine. The reading of the level meter should not exceed 0.20/1000.

4.1.3 During the inspection process, no adjustments should be made to mechanisms and parts that may affect accuracy.

4.1.4 The accuracy inspection and inspection quantity inspection gages shall comply with the relevant provisions of GB/T 10923.

4.1.5 When the actual measured length is less than the length specified in the tolerance, it shall be converted according to the actual measured length. The conversion result shall be rounded off according to GB/T 8170. To micrometer digits.

4.1.6 For shearing machines with an upper tool holder performing inclined reciprocating motion,

4.1.3 is not required to be tested.

4.1.7 For swing-type shearing machines,

4.1.4 are not required to be tested.

4.1.8 CNC shearing machines should be inspected in accordance with 5.2.

4.1.9 If the accuracy level is not clear, it shall be inspected according to the accuracy level III.

4.1.10 The accuracy inspection sequence specified in this document does not represent the actual inspection sequence and accuracy inspection may be performed in any sequence.

4.2 Inspection conditions for working accuracy

4.2.1 The length of the test piece shall comply with the requirements of Table 1.

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