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

GB/T 29548-2024

**High speed precision straight side press - Testing of the
accuracy**

闭式高速精密压力机 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. This document replaces GB/T 29548-2013 "Closed high-speed precision press accuracy" and is different from GB/T 29548-2013 except for the conclusion. In addition to structural adjustments and editorial changes, the main technical changes are as follows:

- Changed the scope of application (see Chapter 1, Chapter 1 of the 2013 edition);
- Changed the term and definition of "bottom dead center repeatability" (see 3.1, 3.1 of the 2013 edition);
- Changed the definitions of "heating acceleration", "heating constant speed" and "constant temperature and constant speed" (see 3.2, 3.3, 3.4, 3.4, 3.2, 3.3 of the 2013 edition);
- Added terms and definitions for initial state (see 3.5);
- Added inspection requirements when the grade is not specified (see 4.2);
- Added load test time requirements (see 5.6);
- Added inspection of new factory products (see 5.11);
- Increased accuracy test ambient temperature requirements (see 5.12);
- Increased the error requirements for the total clearance of the connection parts of the multi-point press (see 5.13);
- Added new test instruments (see 6.1.1);

1 Scope

GB/T 29548-2024 specifies the accuracy testing of high speed precision straight side

presses, the closed-frame machines that stamp motor laminations, connectors and lead frames at hundreds of strokes a minute. Accuracy in such a machine is what makes the part: the parallelism of the slide to the bed, the perpendicularity of the slide motion and the deflection under load determine the die clearance around the whole periphery, and at high stroke rates the dynamic behaviour matters as much as the static geometry, since the machine deforms differently when it is running. The standard sets the test conditions and the requirements, then the checks: the flatness of the bolster and slide surfaces, the parallelism between them, the perpendicularity of the slide travel, the slide repeatability at bottom dead centre, the guideway clearance, the run-out of the flywheel and drive components, and the accuracy under load and at speed, with the permitted tolerances for each and the measurement method. It takes effect on 1 April 2025.

This document specifies the accuracy grades and inspection requirements for closed high-speed precision presses and describes the accuracy inspection methods. This document applies to closed high-speed precision presses.

2 Normative references

The contents of the following documents constitute 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 to This document.

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

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

GB/T 35091 Types and basic parameters of closed high-speed presses

3 Terms and definitions

The terms and definitions defined in GB/T 35091 and the following apply to this document.

3.1 The tolerance of the slider bottom dead point position change during the operation of a closed high-speed precision press.

3.2 The closed high-speed precision press starts running in an accelerated manner from the initial state and accelerates to the rated maximum speed of the press within a certain period of time. process.

3.3 After the heating acceleration test, the closed high-speed precision press is adjusted to 80% of the rated maximum speed and operated at this speed. process.

3.4 The closed high-speed precision press runs at a constant speed of 80% of the rated maximum speed after reaching a thermal equilibrium state through constant speed

operation.

3.5 Initial state The closed high-speed precision press machine is shut down for more than 10 hours.

4 Accuracy levels

4.1 The precision of closed high-speed precision presses (hereinafter referred to as presses) is divided into two levels. precision and ultra-precision. The uses of each precision level