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

GB/T 25937-2026

Replacing GB/T 25937-2010

Radial tyre single stage building machines

子午线轮胎一次法成型机

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5.1 Basic Requirements

5.1.1 The molding machine shall meet the requirements of this document and be manufactured in accordance with the drawings and technical documents approved according to the prescribed procedures.

5.1.2 The mechanical system should not experience abnormal vibrations during no-load and load operation. The movement of moving parts should be smooth and stable, without any jamming. Stagnation, crawling, and overshooting phenomena.

5.1.3 The electrical system should operate in a coordinated manner according to the molding process sequence to ensure accurate procedures and reliable operation.

5.2 Accuracy Requirements The main precision requirements of the molding machine after assembly (including the drum) should meet the requirements of Table 1.

5.3 Functional Requirements

5.3.1 The forming machine should have functions such as material guiding, centering, length setting, cutting, bonding, wrapping, and pressing.

5.3.2 The molding machine should have the function of switching between manual control and automatic control.

5.3.3 The molding machine should have the function of inputting, editing, storing and

recalling tire specification parameters according to different tire models.

5.3.4 The molding machine should have the functions of fault self-diagnosis, real-time fault alarm, and fault information prompt.

5.3.5 The molding machine should have a human-machine interface.

5.3.6 The molding machine should have the functions of dynamic monitoring, real-time display and control of the operating status.

5.3.7 The molding machine should have the function that each functional component can operate independently when manually operated.

5.3.8 The molding machine should have a function to prompt information on the change of the molded tire specifications.

5.3.9 The molding machine should have a molding machine operation information prompt function.

5.3.10 The molding machine should have the function of automatically adjusting the mechanical and electrical parts according to the preset parameters.

5.3.11 The molding machine should preferably have a network interface function.

5.4 Pneumatic System The pneumatic system of the molding machine shall comply with the provisions of Chapter 5 of GB/T 7932-2017.

5.5 Piping System Pneumatic and lubrication system piping and valve connections should be reliable. All piping systems should be clean and unobstructed.

5.6 Safety Requirements

5.6.1 The safety requirements for molding machines shall comply with the provisions of GB 46035.

5.6.2 The enclosure protection rating of electrical equipment shall meet the IP54 requirement in GB/T 4208-2017.

5.6.3 The gas circuit shall be equipped with an overpressure protection device.

5.7 Noise Requirements The noise level of the molding machine during no-load operation should not exceed 80 dB(A), and the noise level during load operation should not exceed [missing value]. 85dB(A).

5.8 Painting and Appearance Requirements

5.8.1 The quality of the paint coating shall comply with the requirements of

3.4.6 in HG/T 3228-2001.

5.8.2 The appearance quality shall conform to the requirements of HG/T 3120.

6 Test and detection methods

6.1 Detection Method The testing of the molding machine shall be carried out in accordance with Appendix C.

6.2 Pre-test checks before no-load operation Before the no-load operation test, the molding machine should be inspected according to the provisions of 5.1, 5.2, and 5.6, based on the premise that the assembly inspection has passed. Meets the requirements.

6.3 No-load operation test

6.3.1 The no-load operation test shall be carried out after meeting the requirements of 6.2, and the continuous no-load operation time shall not be less than 30 minutes.

6.3.2 During no-load operation, the molding machine shall be inspected in accordance with the provisions of

5.3 and 5.7, and shall meet the requirements.

6.4 Load Operation Test

6.4.1 The load operation test shall be carried out after the no-load operation test has passed.

6.4.2 The tire semi-finished parts used in the load operation test shall be qualified products.

6.4.3 During the load operation test, the molding machine should run continuously for a cumulative total of 72 hours without failure. If a failure occurs during this period, the troubleshooting time should not exceed [a certain limit]. Wait 2 hours; otherwise, the test should be repeated.

6.4.4 During the load operation test, the molding machine shall be inspected in accordance with the provisions of 4.2, 5.4,

5.5 and 5.7, and all shall meet the requirements.

7 Inspection Rules

7.1 Inspection Classification Product inspection is divided into factory inspection and type inspection.

7.2 Factory Inspection Each product shall be inspected according to the requirements of 5.1~5.6, 5.8, and

6.3 before leaving the factory. If all the factory inspection items comply with the provisions of this document, then... The product is deemed to have passed factory inspection. Only

after passing inspection and being issued a certificate of conformity can the product leave the factory.

7.3 Type Testing

7.3.1 Type testing shall be conducted under any of the following circumstances.

- a) When new products or old products are transferred to another factory;
- b) If, after formal production begins, significant changes occur in the structure, materials, or processes, affecting product performance;
- c) When resuming production after a product has been out of service for more than 2 years;
- d) When the factory inspection results differ significantly from the previous type inspection results;
- e) During normal production, at least one unit/set shall be randomly inspected every 3 years.

7.3.2 Type testing shall be conducted in accordance with the provisions of this document.

7.3.3 Type testing shall be conducted on a sample basis, with one unit inspected at a time. The type test shall be deemed (qualified) if all items comply with the provisions of this document. If any item fails to comply, Two more units should be randomly selected for inspection. If all items meet the requirements of this document, the type test is deemed (qualified). If there are still any non-compliant items, each unit should be inspected separately. Conduct an inspection.

8 Marking, Packaging, Transport and Storage

8.1 Marking Each molding machine should have a clearly visible nameplate, which should conform to the requirements of GB/T 13306. The nameplate should include.

- a) Product Name;
- b) Product model;
- c) Product number;
- d) This document number;
- e) Installed capacity;
- f) External dimensions;
- h) Name, trademark, and address of the manufacturing unit;
- i) Manufacturing date.