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

GB/T 25711-2023

Replacing GB/T 25711-2010

Foundry machinery - General technical specification

铸造机械 通用技术规范

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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 25711-2010 "General Technical Conditions for Foundry Machinery": Compared with GB/T 25711-2010, except for structural In addition to adjustments and editorial changes, the main technical changes are as follows:

- a) The "scope" of the document has been reformulated (see Chapter 1, Chapter 1 of the:2010 edition);
- b) Added the chapter "Terms and Definitions" (see Chapter 3);
- c) Added the provisions that the "level of digitalization and intelligence" of the machine should be improved and the machine should "conform to the principles of ergonomics" (see 5:1);
- d) Change "basic requirements" to "technical requirements" (see Chapter 6, Chapter 3 of the:2010 edition);
- e) Changed the regulations on edge misalignment of machine parts and components exposed joint surfaces (see 6:2:4 and Table 1, 5:4 and Table 1 of the:2010 edition);
- f) Added "The electrical system of the machine should meet the working conditions of foundry production" and "The electrical control system of the machine should be equipped with MES system system interface" and "the key parts of the machine that may cause major accidents should be equipped with multiple electrical protection devices" (see 6:3:1, 6:3:4 and 6:3:5);

- g) Change "hydraulic, pneumatic, cooling system and lubrication system" to "hydraulic, pneumatic, lubrication and temperature control system", and add "machine's The hydraulic, pneumatic, lubrication and temperature control systems should meet the requirements of the working conditions of foundry production" (see 6:4, 3:8 of the:2010 edition);
- h) Regarding the maximum temperature of the hydraulic medium in the hydraulic system of the machine, "For machines with special requirements, the maximum temperature of the hydraulic medium The degree should meet the requirements of its corresponding technical documents" (see 6:4:3, 6:8:3 of the:2010 edition);
- i) "The coating of pressure vessels should comply with the regulations of NB/T 10558" (see 6:5:2);
- j) Added "The accuracy index of the machine should comply with the relevant product standards" (see 6:6:2);
- k) Changed the regulations on the maximum temperature and temperature rise of machine bearings (see 6:6:4 and Table 2, 6:8:2 and Table 2 of the:2010 edition);
- l) The complete set requirements for production units or production lines have been added, as well as the requirements for equipment that may cause environmental pollution during use: equipment, should be equipped with the provisions of the corresponding treatment device (see 6:7:2 and 6:7:3, 3:4 and 3:5 of the:2010 edition);
- m) Changed "Safety and Sanitation" to "Safety, Environmental Protection and Energy Saving", and added the requirements for dust collectors for machines and Machine requirements for effective limit value requirements (see 6:8, 3:6 of the:2010 edition);

1 Scope

China's national general technical specification for foundry machinery. It specifies the general requirements for the design, manufacture, inspection and acceptance of the machines and equipment used in foundries. This is the horizontal standard of the sector: it states what any foundry machine must be, leaving what a particular machine must do to the individual product standards, and it exists because the foundry environment imposes requirements that a general machinery standard does not anticipate. Every machine in a foundry works in sand, and sand is an abrasive that gets into everything - it destroys unprotected bearings, seals, slideways and hydraulics faster than anything in an ordinary workshop, so the sealing and protection of moving parts is a general requirement here rather than a design choice. Many machines work near molten metal, so heat radiation, splash and the consequences of contact between water and molten metal have to be designed against. The atmosphere carries silica dust, which is both a health hazard requiring extraction at source and a fire and explosion consideration where organic binders and metal dusts are present. The work is heavy and the material handled is hot and hard, so guarding, load-bearing structures and the consequences of a dropped load are safety

matters throughout. And the machines run in a hot, dirty, humid building with a poor electrical environment. So the standard covers the materials and manufacture, the protection of moving parts, the hydraulic and pneumatic systems, the electrical installation, the safety and guarding, the noise limits, the marking and the documentation - as a common baseline that every product standard in the sector then builds on. Issued on 23 May 2023 and in force since 1 December 2023, it replaces GB/T 25711-2010.

This document specifies the models, names and parameters, design principles and technical requirements of foundry machinery products (hereinafter referred to as "machines" or "products"): Requirements, test methods, inspection rules, random technical documents, signs, packaging, transportation and storage: This document applies to the design, manufacture, inspection and maintenance of foundry machinery products:

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to this document:

GB/T 150 (all parts) pressure vessels

GB/T 191 Packaging, storage and transportation icon marks

GB/T 3766 General rules and safety requirements for hydraulic transmission systems and their components GB/T 5226:

1 Safety of machinery and electrical machinery and electrical equipment - Part 1: General technical requirements

GB/T 6576 Machine tool lubrication system

GB/T 7932 General rules and safety requirements for pneumatic systems and their components

GB/T 9969 General Rules for Instructions for Use of Industrial Products GB/T 13306 Signage

GB 20905 Safety requirements for foundry machinery Compilation of

GB/T 23571 Random Technical Documents for Metal Cutting Machine Tools

GB/T 25370 Foundry Machinery Terminology

GB/T 25371 Measurement method for noise sound pressure level of foundry machinery

GB/T 26220 General technical requirements for industrial automation systems and numerical control numerical control systems for integrated machine tools

GB/T 31552 Casting Machinery Classification and Modeling Method

3 Terms and Definitions

The following terms and definitions defined in GB/T 25370 apply to this document:

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