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

GB/T 46639.2-2025

**Foundry machinery - Vocabulary - Part 2: Molding and
coremaking machines and other equipment related to
non-permanent mold casting process**

铸造机械 术语 第2部分：造型、制芯机及其他非永久型铸造设备

(English Translation)

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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 is Part 2 of GB/T 46639 "Terminology for Foundry Machinery". GB/T 46639 has already published the following parts.

---Part 1: Basics;

---Part 2: Molding, Core-Making Machines and Other Non-Permanent Casting Equipment;

---Part 3: Die Casting Machines and Other Permanent Casting Equipment;

---Part 4: Shot blasting machines and other casting cleaning equipment;

---Part 5: Cupola, casting equipment and ladle.

This document is equivalent to ISO 23472-2:2020 "Foundry machinery - Terminology - Part 2: Molding, core-making machines and other non-permanent mold casting".

Manufacturing equipment.

The following minimal editorial changes have been made to this document.

---Notes have been added or changed to some terms in the "Terms and Definitions" section.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Machinery Industry Federation.

This document is under the jurisdiction of the National Technical Committee on Standardization of Foundry Machinery (SAC/TC186).

Introduction

GB/T 46639 "Terminology for Foundry Machinery" covers foundry machinery used in foundry production.

Casting, as a metal heat treatment process that involves filling a mold with molten metal and allowing it to solidify to obtain parts or part blanks, has a long history.

History, and its technology is constantly developing and changing. Depending on the mold used, or the method of filling or solidification of the molten metal, it varies.

Depending on the method, there are many different casting processes, such as sand casting, investment casting, lost foam casting, die casting, low-pressure casting, and metal mold casting.

Force casting and centrifugal casting, etc.

GB/T 46639 "Terminology for Foundry Machinery" serves as the fundamental standard for foundry machinery, and the definitions of each concept selected are applicable to the casting industry.

The general application scope of machinery covers various casting equipment for different casting methods and different production process stages.

GB/T 46639 "Terminology for Foundry Machinery" is proposed to be divided into the following six parts.

---Part 1: Fundamentals. The purpose is to define the basic terminology and definitions of casting machinery.

---Part 2: Molding, Core-Making Machines and Other Non-Permanent Casting Equipment. The purpose is to define molding, core-making machines and other non-permanent casting equipment.

Terminology and definitions for mold casting equipment.

---Part 3: Die Casting Machines and Other Permanent Casting Equipment. The purpose is to define the technical specifications of die casting machines and other permanent casting equipment.

Language and definition.

---Part 4: Shot blasting machines and other casting cleaning equipment. The purpose is to define shot blasting machines and other casting cleaning equipment.

Equipment terminology and definitions.

---Part 5: Cupolas, Casting Equipment and Ladles. The purpose is to define the terminology and definitions for cupolas, casting equipment and ladles.

---Part 6: Other. The purpose is to define the casting machinery-related terms and definitions not covered in Parts 1 through 5.

This document is Part 2 of GB/T 46639, and only covers the terminology and definitions of molding, core-making machines and other non-permanent casting equipment.

The scope includes various molding machines, core-making machines, sand-shedding machines, molding sand preparation and sand recycling equipment, lost foam casting and investment casting equipment, and other related equipment.

Basic concepts of the structural features and functions of equipment, important mechanisms and components, main process flow and parameters.

The development of the GB/T 46639 series of standards, "Terminology for Foundry Machinery," has laid the foundation for the formulation and revision of standards and technical documents in the field of foundry machinery.

It provides a unified standard for technical terminology in conjunction with relevant scientific and technological publications.

Casting Machinery Terminology Part 2: Molding, Core making machines and other non-permanent casting equipment

1 Scope

This document defines the terms and definitions for casting mechanical molding, core making machines, and other non-permanent casting equipment.

This document applies to the formulation and revision of standards in the field of casting machinery, as well as technical documents and related scientific and technological publications.

2 Normative references

This document has no normative references.

3 Terms and Definitions

The following terms and definitions apply to this document.

3D Vibrating Table

A vibratory compaction table capable of achieving compaction via vibration in the X, Y, and Z directions.

A liquid control system for two hardeners, A and B, with different properties, the pump flow rate is adjusted via a frequency converter to regulate the dosage of A and B in real time and the amount added each time.

An automatic control system that ensures reasonable hardening time and stable strength of sand molds.

A device for sorting out defective or prototype parts before sand removal.

A machine that uses compressed air to press wax molds.

static pressure molding air-flow-squeezemolding the molding method employs airflow pre-compaction and pressure head final compaction.

static pressure molding line air-flow-squeezemoldingline an automated molding line connects a static pressure molding machine (main machine) and auxiliary machines with mold or sand box conveying equipment according to the process flow.

A molding machine that uses static pressure molding to manufacture casting molds.

Note: The molding sand is first pre-compacted with airflow, and then finally compacted by compaction.