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

GB/T 46639.4-2025

**Foundry machinery - Vocabulary - Part 4: Abrasive blasting
machines and other equipment related to cleaning and finishing
for casting**

铸造机械 术语 第4部分：抛喷丸清理机及其他铸件清理设备
(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 4 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 modified to adopt ISO 23472-4:2022 "Foundry machinery - Terminology - Part 4: Shot blasting and other casting cleaning".

equipment".

The technical differences between this document and ISO 23472-4:2022, and the reasons therefor, are as follows.

---Permitted terms have been added to some terminology entries to meet industry-standard usage requirements.

The following editorial changes have been made to this document.

---Notes have been added, changed, or deleted for some terminology entries.

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 covers casting machinery used in casting 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, as the fundamental standard for casting machinery, defines each concept applicable to the general application of casting machinery.

The scope covers various casting equipment for different casting methods and different production process stages.

GB/T 46639 is proposed to be divided into the following 6 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 machines, core-making machines, and other non-permanent casting equipment.

Terminology and definitions for long-form 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 4 of GB/T 46639, and only covers the terms and definitions for shot blasting machines and other casting cleaning equipment, including...

Structural features, functions, and key components of various shot blasting machines, riser removal devices, core removers, grinding machines, and other related equipment.

Basic concepts of components, main processes and parameters.

The formulation of GB/T 46639 provides a foundation for the development and revision of standards in the field of casting machinery, as well as for technical documents and related scientific and technological publications.

It provides a unified basis for terminology.

Casting Machinery Terminology Part 4: Shot Peening Cleaning machines and other casting cleaning equipment

1 Scope

This document defines the terms and definitions for foundry machinery shot blasting and other casting cleaning 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.

Abrasive blasting; shot blasting the process of using abrasive materials to continuously impact a workpiece or surface to be cleaned in order to achieve the desired effect.

[Source. ISO 23472-1:2020, 3.1] 3.2 A machine that uses centrifugal force or compressed air as an abrasive acceleration method to complete the shot peening cleaning process.

Abrasive cut-off machine; grinding cutter A device that uses a high-speed rotating cutting

wheel to cut the gating system or other metal materials in castings.

Abrasive media; shotblasting media A particulate metal or non-metal material that is forced to the surface of a workpiece to achieve the desired effect.

Note: For the classification of metallic abrasives, see ISO 11124-1; for the classification of non-metallic abrasives, see ISO 11126-1.

[Source. ISO 23472-1:2020, 3.3] 3.5 Bullet circulation system in a shot peening machine, a mixture of abrasive and cleaned material is collected, and the abrasive is separated from the mixture for supply.

A system for shot peening.

Note: This system typically consists of a bucket elevator, screw conveyor, shot separator, vibrating screen, shot storage hopper, shot gate, and shot flow pipe.

A device that uses gravity, airflow, screens and/or magnetism to remove impurities from used abrasives and separate reusable abrasives.