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

GB/T 47197-2026

**Foundry machinery - Cupola furnaces and associated melting
equipment - Safety technical specification**

铸造机械 冲天炉及熔炼配套设备 安全技术规范

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Table of Contents

1.Scope	1
2 Normative References	1
3.Terms and Definitions	2
4.1 General Rules	3
4.2 General Requirements	4
4.3 Specialized Equipment Requirements	6
5.Verification of safety requirements and/or risk reduction measures	13
5.1 Verification Method	13
5.2 Verification Checklist	13
6.Information	13
6.1 General Requirements	13
6.2 Signal and Warning Devices	13
6.3 Signs, Symbols (Pictographics) and Written Warnings	14
15 Table B.1 Verification of Safety Requirements and/or Risk Mitigation Measures.....	18

Foreword

This document conforms to GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting is scheduled. 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/TC 186). This document was drafted by: Qingdao Qingli Environmental Protection Equipment Co., Ltd., Qingdao Zhongzhida Environmental Smelting Equipment Co., Ltd., and Qingdao Benno Magnetolectric. Technology Co., Ltd., Nan'an Zhongji Standardization Research Institute Co., Ltd., Xiamen Baishunde Engineering Technology Co., Ltd., Jiangyin Foundry Equipment Factory Limited Liability Company, China Automotive Engineering Corporation, Fujian Minxuan Technology Co., Ltd., Jinhua Huadong Environmental Protection Equipment Co., Ltd. Jinan Foundry & Forging Inspection and Testing Technology Co., Ltd., Qingdao Kaijie Heavy Industry Machinery Co., Ltd., Weihai Gongyou Foundry Machinery Co., Ltd., Shandong Jie Chuang Machinery Co., Ltd., Qingdao Huihong Liangtai Intelligent Equipment Co., Ltd., Qingdao Antai Heavy Industry Machinery Co., Ltd., YTO (Luoyang) Casting & Forging Co., Ltd. The company,

China National Heavy Duty Truck Group Jinan Power Co., Ltd. Molding Plant, Huace Testing & Certification Group Co., Ltd., Suzhou Mingzhi Technology Co., Ltd. Limited Company, China Machinery Research Institute of Standards and Technology (Beijing) Co., Ltd. The main drafters of this document are. Yu Kuopei, Duan Jinting, Li Haichun, Zheng Huating, Chen Yongman, Xia Xinhai, Liu Xiaolong, Zhu Bin, Jiang Chao, and Li Chen. Wang Hua, Su Ligu, Zhao Peng, Wang Decheng, Chen Liang, Ji Yan, Wang Jianping, Bai Yang, Cao Xuefeng, Lu Gaochun, Zhang Xiaofei.

According to the classification of GB/T 15706-2012, this document belongs to Class C standards. This document is particularly relevant to the following stakeholders who have a stake in the mechanical safety covered herein. --Machine manufacturer; --Health and Safety Agency. Other stakeholders affected by the level of mechanical safety include. --Machine users; --Machine owner; --Service provider. All of the aforementioned stakeholders may participate in the drafting of this document. The scope of the machines covered in this document, as well as the hazards, hazardous conditions, and hazardous events covered, is given in the scope of this document. When the requirements in this document differ from those in Category A or Category B standards, for machines designed and manufactured in accordance with this document... For this instrument, the requirements in this document take precedence over the requirements in other standards. Cupola furnace and smelting equipment for foundry machinery Safety Technical Specifications

1 Scope

GB/T 47197-2026 is the Chinese national standard covering the cupola - a coke-fired shaft furnace producing molten iron and carbon monoxide continuously, with its charging, its tapping, its water cooling that must never leak into the melt and its gas cleaning. It is one of seven foundry machinery safety standards published together on 27 February 2026, which between them cover a whole foundry: melting, moulding and coremaking, pouring, shakeout, blasting, sand plant and die casting. First edition, in force since 1 September 2026. It was issued on 27 February 2026 and has been in force since 1 September 2026, as a first edition. The document is under the responsibility of the China Machinery Industry Federation. This page is published from the official record of the 2026 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document specifies the safety requirements and/or risk mitigation measures and usage information for cupola furnaces and smelting equipment, and describes the corresponding... Verification method. This document outlines the use of cupola furnaces and smelting equipment for their intended purpose, as well as under conditions of misuse that the manufacturer could reasonably foresee. Examples of major hazards, hazardous conditions, or hazardous events associated with this type of equipment during use (see Appendix A). This document applies to the design, manufacture, and acceptance of cupola

furnaces and smelting equipment. Note

1.The equipment applicable to this document includes cupola furnaces, cupola furnace auxiliary equipment (rotary chute, combustion chamber, heat exchanger, slag separator, and cupola furnace foreground), and batching equipment. Equipment, feeding equipment, cupola furnace and electric furnace flue gas treatment equipment. Note

2.This document does not cover specific major hazards related to fans, pumps, and electrically powered melting furnaces used in cupola smelting.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are listed below. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB 2894 Safety Colors and Safety Signs

GB/T 3836.15 Explosive Atmospheres - Part

15 Design, Selection and Installation Specifications for Electrical Installations

GB/T 4208-2017 Degrees of protection provided by enclosures (IP codes)

GB/T 5226.1-2019 Electrical Safety of Machinery - Electrical Equipment of Machinery - Part