

ICS 29.160.30

CCS K 26



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

GB/T 47160-2026

**Crane and metallurgical motors and canned motors - Safety
requirements**

起重冶金和屏蔽电机 安全要求

Issued on: February 27, 2026

Implemented on: September 1, 2026

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

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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. 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 Electrical Equipment Industry Association. This document is under the jurisdiction of the National Technical Committee on Standardization of Rotating Electrical Machines (SAC/TC26). This document was drafted by: Jiamusi Explosion-proof Motor Research Institute Co., Ltd., Jiamusi Electric Machinery Co., Ltd., and Dalian Huanyou Shielded Pump Co., Ltd. Limited Company, Jiangsu Provincial Special Equipment Safety Supervision and Inspection Institute, China Machinery International Engineering Design & Research Institute Co., Ltd., Guangdong Provincial Special Equipment Testing and Research Institute, Zhongshan Testing Institute, Anda Explosion-proof Heavy Industry Machinery Manufacturing Co., Ltd., Jiangxi Jiangte Motor Co., Ltd., Wuxi Xindali Motor Limited Liability Company, Hefei Xinhua Shielded Pump Co., Ltd., Dalian Haimitike Pump Industry Co., Ltd., Dalian Imperial Shielded Electric Pump Co., Ltd., Wuxi City Anhua Shielded Electric Pump Factory, Wuxi Gangda Electric Machinery Co., Ltd., Nanjing Special Electric Machinery Factory Co., Ltd., Dalian Sifang Electric Pump Co., Ltd., Daqing Hua Yu Petroleum Machinery Manufacturing Co., Ltd., Changzhou Institute of Technology, and Anhui Xiongfeng Lifting Machinery Co., Ltd. The main drafters of this document are: Wang Liming, Li Xingbo, Shan Lina, Wang Xinren, Wang Wei, Lin Kaiming, Li Xiulin, Wang Liping, Wang Weiping, and Xu Min. Wang Xiquan, Sun Defu, Zhao Dan, You Xuming, Chen Jiang, Hu Jianxing, Zuo Zhanku, Xi Xiaoping, Xu Yongming, Zhou Xiaoyan, Li Tong. Safety requirements for lifting, metallurgy and shielded motors

1 Scope

GB/T 47160-2026 is the Chinese national standard covering two demanding families of electric motor - the crane and metallurgical duty machines that start, reverse and brake continuously beside hot metal, and the canned motors whose rotor runs sealed inside the pumped fluid with no shaft seal to leak. It fixes the safety requirements, the insulation and thermal protection, the enclosure and the tests for both. First edition, 19,000 words. 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 Electrical Equipment Industry Association. 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 for lifting metallurgy and shielded motors.

This document applies to motors used in lifting and metallurgical machinery, elevators, tower cranes and other construction machinery, flatcar motors, and conical motors. Activities related to the design, manufacture, inspection, and operation of rotor motors, escalator motors, and shielded motors.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. 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/T 755 Ratings and Performance of Rotating Electrical Machines GB/T 825 Eye Bolts

GB/T 1971 Markings on wire ends and direction of rotation for rotating electrical machines

GB/T 2423.3 Environmental testing - Part

4 Aging oven - Single-chamber oven

GB/T 12113-2023 Methods for measuring contact current and protective conductor current

GB/T 12665 Requirements for damp heat test of electric motors used under general environmental conditions

7 Test method for determining the temperature index of enameled winding wires

GB/T 4207 Determination of Tracking Resistance Index and Relative Tracking Index of Solid Insulating Materials

GB/T 4942 Protection ratings (IP codes) for integral structures of rotating electrical machines

GB/T 5169.11 Fire Hazard Testing of Electrical and Electronic Products - Part

11. Basic Test Methods for Glow Wire/Hot Wire - Finished Products Hot Wire Flammability Test Method (GWEPT)

GB/T 5169.12 Fire Hazard Testing of Electrical and Electronic Products - Part

12. Basic Test Methods for Glow Wire/Hot Wire Materials Hot Wire Flammability Index (GWFI) Test Method

GB/T 5169.16-2017 Fire Hazard Testing of Electrical and Electronic Products - Part

16 Test Flame 50W - Horizontal and Vertical Flames Flame test method

GB/T 5169.21 Fire Hazard Testing of Electrical and Electronic Products - Part

21. Abnormal Hot Ball Pressure Test Method

GB/T 5465.2-2023 Graphical symbols for electrical equipment - Part

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