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**GB/T 14711-2013**

**Replacing GB/T 14711-2006**

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**General requirements for safety of small and  
medium size rotating electrical machines**

**中小型旋转电机通用安全要求**

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## Foreword

All technical contents of this standard are mandatory.

This standard was drafted in accordance with GB/T 1.1-2009.

This standard replaced GB 14711—2006 Safety Requirements of Medium and Small Electric Rotating Machine.

Compared with GB 14711-2006, in addition to the editorial amendments, the main changes are as follows:

- The name of standard was changed to “General Requirements of Safety of Medium and Small Electric Rotating Machine”;
- Adjustment of structure of standard, the sign and description sections were advanced to Chapter 4; All tables are moved in the body text;
- The high-voltage motor, DC motor, variable-frequency and variable-speed motor and other additional contents will not be presented separately, and all are included in the structure and test chapter;
- In the grounding device requirements, add the requirements of assessment of grounding resistance (refer to 9.11);
- Add the high frequency resistant pulse test of special electric machine enameled wire of frequency control in the electrical insulation (refer to Chapter 15);
- Add the assessment contents of proof of insulation structure in the assessment of insulation structure, and rank the insulation structure as the sine wave power supply or DC power supply insulation structure and variable frequency power supply insulation structure for assessment separately (refer to Chapter 16);
- Add the quota test item for the motor, and identify the assessment requirements for identified voltage range and frequency range of electric machine to verify the consistent value on the electric machine nameplate and actual value (refer to Chapter 20);
- The ambient temperature in the heating test is amended to 10 °C~40 °C from the original 0 °C~40 °C (refer to Table 14, Table 1 of Edition 2006);
- Add the contact current assessment requirements (Refer to Chapter 22);
- Add the impact withstand voltage test between the motor winding in the electric

strength chapter (Refer to 24.3);

- Add the EMC assessment requirements (Refer to Chapter 29);
- Delete the ball pressure test device schematic diagram in the heat resistance deformation test chapter (Refer to Diagram 1 of Edition 2006);
- Delete the portable and standby generator (Chapter 11 of Edition 2006);

This standard is proposed by China Electrical Equipment Industrial Association.

This standard under the jurisdiction of National Electric Rotating Machine Standardization Committee (SAC/TC 26).

Organization in charge of drafting of this Standard: Shanghai Electrical Appliance Research Institute (Group) Co, Ltd., National Quality Supervision and Inspection Center of Small and Medium Electric Machine, Shandong Huali Electric Motor Group Co.,Ltd., Hebei Electric Motor Co.,Ltd., Wolong Electric Group Co.,Ltd., Changsha Electromotor Factory Co, Ltd., Simon Electric Machine (Hubei) Co., Ltd., Chongqing Electric Machine Federation Ltd., Yongji Xinshisu Electric Equipment Co, Ltd., Wendeng Allwin Motors Mfg. Co, Ltd., Jiangsu Jingjiang Electric Machine Manufacturing Co., Ltd., jiangsu Xianda Explosion-Proof Co., Ltd., Guangdong Dongguan Electric Motor Co.,Ltd., Nanchang Kangfu Generators Technology Co., Ltd., Jiangmen Jiangsheng Electric Machinery Works Co., Ltd., Zhejiang Jinlong Electrical Machinery Stock Co.,Ltd., Zhejiang Taizhou Fuda Electromechanical Co., Ltd., Shandong Kaiyuan Electric Motor Co., Ltd., Machinery & Electrical Products Testing Center of Shanghai CIQ, Lu'an Jiang Huai Motor Co., Ltd and Shanghai CDQC Electric Co., Ltd.

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Previous versions that this standard replaces are as follows:

——GB 14711—1993, GB 14711—2006.

# **General Requirements of Safety of Medium and Small Electric Rotating Machine**

## **1. Scope**

This standard specifies the general requirements of safety of medium and small electric rotating machine (electric machine and generator, hereinafter referred to as the electric machine) with the general purpose.

This standard is applied to the medium and small electric rotating machine with general purpose, and the electric machine with small power produced according to GB/T 5171 may use GB 12350 as the assessment basis.

The general requirements of safety of other various electric machines may refer it for use.

## **2. Normative references**

Following documents are indispensable for application of this document. For the dated documents so quoted, only dated versions apply to this document. For the undated documents so quoted, the latest versions (including all modification sheets) apply to this document.

GB 755 - 2008 Rotating electrical machines - Rating and performance

GB/T 825 - 1988 Eyebolts

GB 1971-2006 Rotating electrical machines—Terminal markings and direction of rotation

GB/T 2423. 4-2008 Environmental testing for electric and electronic products - Part 2: Test method - Test Db: Damp heat, cyclic ( 12h+12h cycle)

GB/T 2423. 55 - 2006 Environmental testing for electric and electronic products--Part 2 : Test methods--Test Eh: hammer tests

GB/T 2900. 25 - 2008 Electrotechnical terminology—Rotating electrical machines

GB/T 4207 - 2012 Method for the determination of the proof and the comparative tracking indices of solid insulating materials

GB/T 4942.1 - 2006 Degrees of protection provided by the integral design of rotating electrical machines (IP code) - Classification

GB/T 5169.11-2006 Fire hazard testing for electric and electronic products - Part 11: Glowing/hot-wire based test methods - Glow-wire flammability test method for end-products

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