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

GB/T 22715-2016

Replacing GB/T 22715-2008

**Impulse voltage withstand levels of form-wound stator coils for
rotating a.c. machines**

旋转交流电机定子成型线圈耐冲击电压水平

(English Translation)

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Foreword

This standard is drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the translation method equivalent to IEC 60034-15.:2009 "Rotating electrical machines Part 15. AC motors Stator forming coils Impulse voltage level "(third edition, english version) this standard replaces GB/T 22715-2008 "AC motor stator forming coil impact voltage level". With GB/T 22715-2008, the main technical changes are as follows.

- modified the scope of the standard (see Chapter 1, see Chapter 1 of the 2008 edition);
- Added terms (see Chapter 2);
- Increases the test level of the variable frequency motor coil (see Chapter 3);
- increase the tolerance of the relevant test parameters (see Table 1);
- modified the tolerance of the wavefront time of the forward wave of the steep wave (see 4.2.2, 5.1.2.2 of 2008);
- increased the voltage level of the inspection test (see 5.1);
- Added instructions for the test (see Appendix B).

This standard is proposed by China Electrical Equipment Industry Association.

This standard is under the jurisdiction of the National Committee for Standardization of Rotating Electric (SAC/TC26).

This standard is responsible for drafting units. Shanghai Electric Appliance Research

Institute, Xi'an Pacific Fisherman Motor Co., Ltd., Shandong Huali Electric Group Co., Ltd. Co., Ltd., Zhejiang Jinlong Electric Co., Ltd., China Shipbuilding Heavy Industry Motor Technology Co., Ltd., Shanghai Electric System Energy Saving Engineering Technology Research Center Co., Ltd., Shanghai Electrical Equipment Testing Institute.

This standard participates in the drafting unit. Zhejiang Xizi Fu Wo De Motor Co., Ltd., China Changjiang Shipping Group Motor Factory, Shanghai Shenfa Detector Co., Ltd., Taihao Shenyang Electric Co., Ltd., Hangzhou MiG Motor Co., Ltd., Jiamusi Electric Co., Ltd., Zhongda Electric Co., Ltd.

Co., Ltd., Shanghai High Speed Motor Co., Ltd., Anhui Tonghua New Energy Power Co., Ltd., CSR Zhuzhou Electric Co., Ltd., Xiangtan Electric Co., Ltd., Nanyang explosion-proof Group Co., Ltd.

1 Scope

This standard specifies the test voltage applied to the main insulation and turn-to-turn insulation of the sample coil as well as the test procedure.

This standard is applicable to AC motors made up of stator forming coils.

2 Terms and definitions

The following terms and definitions apply to this document.

Sampling test sampletest Under the new conditions of use, the coils capable of adequately representing the final structure for the motor are tested. Its purpose is to evaluate the insulation junction the manufacturing method and process of the structure.

Check the test routinetest Tests on all coils of the motor.

Forming the stator coil form-woundstatorcoil A coil that has been machined, insulated and essentially complete before the stator is embedded.

Wavefront time fronttime T1 the time required for the peak voltage to rise from 0% to 100%. And is defined as the peak at 30% and 90% of the time interval 1.67 times.

Half-peak time time-to-halfvalue T2 the start and peak times are reduced to half the time interval.

3 Impulse voltage level

The withstand voltage level of the special rated voltage is calculated according to the formula given in Note 2 in Table 1. Table 1 gives some of the conventional rated voltage of the impact voltage level and round the whole to the nearest integer value. The test level of the variable frequency motor depends on the rated voltage given by the manufacturer. Such

as IEC 60034-18-42, taking into account the maximum overvoltage that may occur at the motor end, increasing the test level by a factor is when the. This coefficient can be as high as 1.7 for a three-level inverter, but if the level is more, the coefficient is lower.