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GB/T 1032–2012

Replace GB/T 1032–2005

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**Test procedures for three-phase induction motors**

**三相异步电动机试验方法**

(IEC 60034-2-1: 2007, Rotating electrical machines—Part 2-1: Standard methods for determining losses and efficiency from tests (excluding machines for traction vehicles), NEQ)

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## Foreword

This Standard is drafted given in rules specified in GB/T 1.1-2009.

This Standard will replace GB/T 1032-2005 *Test Procedures for Three-phase Induction Motors*, comparison with GB/T 1032-2005, in addition to writing format, main technical changes of this Standard are as follows:

- Changed the selection of megameter (see 5.1.1.2 and Table 1), added the measurement methods for absorption ratio and polarization index;
- Added the determination of other insulation resistances in 5.1.2;
- Added the other thermal test methods in 6.6.3.4, the rest applied methods specified in GB/T 21211-2007, e.g. addition method of induction motor (see Clause 6 in GB/T 21211-2007), equivalent load method of induction motor (see Clause 10 in GB/T 21211-2007);
- Added the stray load loss (see 10.6.6) of induction motor measured by star winding asymmetry voltage no-load test method (Eh-star);
- Added the test methods and efficiency measuring uncertainty (see 11.1.2);
- Added the determination of shaft current (see 12.12);
- Deleted all contents of stray load loss  $P_s$  determined according to 0.5% of rated input power when rated load (see 9.5.4.3 in previous 2005);
- Deleted all contents of stray load loss  $P_s$  determined according to 9.5.4.2 when rated load (see 9.5.4.2 in previous 2005);
- Deleted annex D (see previous 2005).

Please note that some contents in this standard may relate to patent rights, which issue organization shall not be held responsible for identifying any or all such patent rights.

This Standard is not equivalent to IEC 60034-2-1: 2007 *Rotating electrical machines –Part 2-1: Standard methods for determining losses and efficiency from tests (excluding*

*machines for traction vehicles).*

This Standard is proposed by China Electrical Equipment Industry Association.

This Standard is under the jurisdiction of National Technical Committee 26 on Electric Rotating Machinery of Standardization Administration of China.

The responsible drafting organizations are Shanghai Electrical Apparatus Research Institute (Group) Co., Ltd, Harbin Research Institute of Giant Motors, Xiangtan Electric Manufacturing Co., Ltd, Shandong Huali Motor Group Co., Ltd, Wuxi Hwada Motor Co., Ltd, Jiangsu QingJiang Electric Motor Co., Ltd, Wolong Holding Group Co., Ltd, Jiangmen Jiang Sheng Machinery Factory Co., Ltd, Jiamusi Electric Machine Co., Ltd, Wuxi Xi'an Explosion Proof Motor Co., Ltd, Guangdong Province Dongguan Motor Co., Ltd, Zhejiang Jinlong Electrical Machinery Stock Co., LTD, Suzhou Jiangnan Elevator (Group) Co., Ltd, Changsha Electrical Machinery Co. Ltd, Zhejiang SEEKMA Motor Co., Ltd, Siemens Electric Motor (China) Co., Ltd, Leroy Somer Electro-Technique (Fuzhou) Co., Ltd, Zhejiang Waland Electric Co., Ltd, Harbin Electric Machinery Company Limited, Shanghai Branch Test Center of Coal Science Research Institute, Shanghai Electric Machinery System Energy-saving Engineering Technology Research Center, Shanghai Testing & Inspection Institute of Electrical Equipment, Shanghai Dianke Electric Machinery Technology Co., Ltd.

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This standard replaces the following historical editions issued:

- GB/T 1032-1968;
- GB/T 1032-1985;
- GB/T 1032-2005.

# Test procedures for three-phase induction motors

## 1 Scope

This Standard specifies the test requirements and test methods for three-phase induction motors.

This Standard is applicable to three-phase induction motors.

## 2 Normative References

The articles contained in the following documents have become this standard when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

GB 755-2008 Rotating electrical machines - Rating and performance

GB 10068-2008 Mechanical vibration of certain machines with shaft heights 56 mm and higher-measurement evaluation and limits of vibration severity

GB/T 10069.1-2006 Measurement of airborne noise emitted by rotating electrical machines and the noise limits Part 1: Method for the measurement of airborne noise emitted by rotating electrical machines

GB/T 21211-2007 Rotating electrical machines - Equivalent loading and super-position techniques - Indirect testing to determine temperature rise

GB/T 22715-2008 Impulse voltage withstand levels of form-wound stator coils for rotating a.c. machines

GB/T 22719.1-2008 Interturn insulation of random-wound winding for AC low-voltage electrical machines - Part 1: Test methods

GB/T 22719.2-2008 Interturn insulation of random-wound winding for AC low-voltage electrical machines - Part 2: Test limits

JB/T 7836.1-2005 Electric heater for electrical machine Part 1: General technique specifications

JB/T 10500.1-2005 Embedded thermometer resistance for electrical machines Part1: General specification, measuring methods and examine rule

IEC 60034-2-1: 2007 Rotating electrical machines—Part 2-1: Standard methods for determining losses and efficiency from tests (excluding machines for traction vehicles)

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