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Implementation Rules for Energy Efficiency Labeling of Permanent Magnet Synchronous Motors

永磁同步电动机能源效率标识实施规则

Table of Contents

1 General.....	3
2 Style and Specification of Label	4
3 Test of Energy Efficiency	5
4 Determination of Label Information	5
5 Printing, Applying and Displaying of the Label	6
6 Filing of the Label	7
7 Label Announcement.....	9
Appendix 1 Example of Energy Efficiency Label Style of Permanent Magnet Synchronous Motor	10
Appendix 2 Test Report on Energy Efficiency of Permanent Magnet Synchronous Motor	14
Appendix 3 Filing Form of Energy Efficiency Label of Permanent Magnet Synchronous Motor	21
Attached-table	23

Rules for Implementing of Energy Efficiency Label of Permanent magnet Synchronous Motor

1 General

1.1 This Rule is formulated according to the *Measures for the Administration of Energy Efficiency Labels* (hereinafter referred to as *Measures*).

1.2 This Rule is applicable to the use, filing and announcement of the energy efficiency label (hereinafter referred to as the label) of industrial general-purposed permanent magnet synchronous motors. This includes:

- (1) The single speed closed self-fan cooling AND continuous working system (S1) asynchronous-start three-phase permanent magnet synchronous motor of which the voltage is 1140 V and below; powered by 50 Hz three-phase AC supply; the rated power is 0.55 kW~375 kW; the number of poles is 2 poles, 4 poles, 6 poles, 8 poles, 10 poles, 12 poles and 16 poles;
- (2) Permanent magnet synchronous motor for elevator of which the voltage is 1000 V and below, powered by variable-frequency supply, the rated power is 0.55kW~110 kW;
- (3) Variable-frequency driven permanent magnet synchronous motor of which the voltage is 1000 V and below, powered by variable-frequency supply, the rated power is 0.55kW~90 kW;
- (4) Remanufacturing of industrial general-purposed permanent magnet synchronous motors.

The inapplicable motors mainly include:

- (1) The motor that is completely embedded with other devices, such as pump, fan, compressor, traction machine, and reduction gearbox; but cannot be tested separately;
- (2) The motor with the brake inside the motor casing (it is considered to be outside the casing for inside the fan).

2 Style and Specification of Label

2.1 The label is the one with blue-white background color, length of 45mm, and width of 30mm.

2.2 The name of the label is: China Energy Efficiency Label (English name is CHINA ENERGY LABEL), asynchronous-start three-phase permanent magnet synchronous motor includes the following:

- (1) The name (or abbreviation) of the manufacturer;
- (2) Specifications and models;
- (3) Energy efficiency grade;
- (4) Efficiency (%);
- (5) Rated power (kW);
- (6) The number of poles;
- (7) The number of mandatory national standard for energy efficiency;
- (8) Energy efficiency information code;
- (9) "Leader" information of energy efficiency (only for those products listed in the national energy efficiency "leader" directory).

The permanent magnet synchronous motor for elevator and variable-frequency driven permanent magnet synchronous motor shall include the following:

- (1) The name (or abbreviation) of the manufacturer;
- (2) Specifications and models;
- (3) Energy efficiency grade;
- (4) Efficiency (%);
- (5) Rated power (kW);
- (6) Rated speed (r/min);
- (7) The number of mandatory national standard for energy efficiency;
- (8) Energy efficiency information code;
- (9) "Leader" information of energy efficiency (only for those products listed in the

nameplate.

4.3 The relevant parameters of product energy efficiency performance such as energy efficiency grade and efficiency shall be determined based on the currently valid version of GB 30253 and test report. The efficiency of the label shall not exceed the value range of the corresponding energy efficiency grade.

4.4 The based mandatory national standard for energy efficiency refers to the currently valid version of GB 30253.

4.5 The manufacturer or importer directly generates the product energy efficiency information code by the label information system when filing.

4.6 Products listed in the national energy efficiency "leader" directory shall be marked with energy efficiency "leader" information.

5 Printing, Applying and Displaying of the Label

5.1 Every motor that leaves the factory or imports shall be applied with label.

5.2 The manufacturer or importer prints its own label and is responsible for the quality of the printing.

5.3 The label shall be printed on coated paper of 80 grams or more, or other durable materials.

5.4 The label shall be pasted or hung on the obvious part of the front of the motor; and explained on the product packaging or in the instruction manual. If the product is traded through online commodities, the corresponding label shall also be displayed in a prominent position on the main page of product information display.

5.5 The label applied to the motor shall comply with the provisions of Article 2 of this rule; and the pattern, text and color shall not be changed. The label specifications may be scaled up on the basis of Article 2.1 of this rule.

5.6 The label used in product packaging, instruction manuals, the main page of information display of online trading products, and advertising may be scaled up or down; the paper version may be printed in monochrome; and the text in the label shall be legible.

5.7 For the products listed in the national energy efficiency "leader" directory, products that leave factory 30 days after the directory is published shall use the energy efficiency label containing the energy efficiency "leader" information.

6.5 Materials that are written in foreign languages shall be accompanied by Chinese translation, and the Chinese text shall prevail.

7 Label Announcement

7.1 The authorized agency shall verify and revoke the relevant filing information of the manufacturer or importer of products with substandard energy efficiency; and announce in time.

7.2 The authorized agency shall establish a product information database; provide product information query services to manufacturers, consumers, and regulatory authorities; and promptly verify and announce the verification and supervision and inspection of the label.

7.3 Enterprises, consumers and other relevant parties may complain and report on the violations of the label in the following ways:

Telephone/Fax: (010) 58811745/58811714;

Website: "China Energy Label Website" (www.energylabelrecord.com).

Appendix:

1. Example of Energy Efficiency Label Style of Permanent Magnet Synchronous Motor
2. Test Report on Energy Efficiency of Permanent Magnet Synchronous Motor
3. Filing Form of Energy Efficiency Label of Permanent Magnet Synchronous Motor

Precautions

1. The report is invalid if there is no "special seal for test report" or "official seal of test organization".
2. The duplication report is invalid if it is not re-stamped with "special seal for test report" or "official seal of test organization". No part of this report may be copied without the written consent of the entrusting organization.
3. The report is invalid without the signature of the chief inspector, reviewer, and approver; and the report shall be affixed with a seal on the perforation.
4. Report alteration is invalid.
5. If there is any objection to the test report, it shall be submitted to the test organization within 15 days from the date of receipt of the report; it shall not be handled overdue.
6. Commission test is only responsible for incoming samples.
7. The basis for test and determination is the currently valid version of the standard cited in the implementation rules for the energy efficiency label of permanent magnet synchronous motors.

Name of test organization: _____

Address of test organization: _____

Contact person: _____

Contact phone: _____

Fax: _____

E-mail: _____

Appendix 3

Filing Form of Energy Efficiency Label of Permanent Magnet Synchronous Motor

I. Declaration from filing party

This organization ensures as follows:

The used energy efficiency label information is consistent with the filing information;

When the product with this specification and model changes the energy efficiency label, it shall be updated the filed to an authorized agency;

Ensure that products of this specification and model always meet the relevant requirements for the use of energy efficiency label.

II. Marked information of energy efficiency label

Name of the manufacturer: _____

Trademark: _____

Specification and model: For specification and model information of filing unit, refer to attached-table

Product category:

- ☐ Asynchronous-start three-phase permanent magnet synchronous motor
- ☐ Permanent magnet synchronous motor for elevator
- ☐ Variable-frequency driven permanent magnet synchronous motor

Casing materials: ☐ Aluminum casing ☐ Stainless-steel casing

☐ Cast-iron casing ☐ Others _____

Filing unit: ☐ H≤160 ☐ H>160 ☐ Name by flange No.

☐ Name by other methods _____

Name of product series: _____

Energy efficiency level: ☐ Level-1 ☐ Level-2 ☐ Level-3

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