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## GENERAL NOTICES • ALGEMENE KENNISGEWINGS

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### DEPARTMENT OF TRADE, INDUSTRY AND COMPETITION

#### NOTICE 2064 OF 2023

#### **NATIONAL REGULATOR FOR COMPULSORY SPECIFICATIONS ACT (Act No. 5 of 2008), AS AMENDED THROUGH THE LEGAL METROLOGY ACT (Act No. 9 of 2014)**

#### **PROPOSED COMPULSORY SPECIFICATION FOR EFFICIENCY REQUIREMENTS OF ELECTRIC MOTORS (VC 9113)**

I, Ebrahim Patel, the Minister of Trade, Industry and Competition, hereby under section 13 (4) (a) of the National Regulator for Compulsory Specifications Act, (Act 5 of 2008), and, on the recommendation of the NRCS, intends to declare the compulsory specification set out in the attached schedule, to be a compulsory specification for efficiency requirements of Electric Motors.

Any person, who wishes to comment on the intention of the Minister to thus declare the Compulsory Specification concerned, shall submit their comments, in writing, to the Chief Executive Officer, National Regulator for Compulsory Specifications, email: [Theresa.Stoltz@nrqs.org.za](mailto:Theresa.Stoltz@nrqs.org.za), Private Bag X 25, Brooklyn, 0075, on or before the date one (1) month after the publication of this notice.

**EBRAHIM PATEL**

**MINISTER OF TRADE, INDUSTRY AND COMPETITION**

**SCHEDULE**  
**COMPULSORY SPECIFICATION FOR EFFICIENCY REQUIREMENTS OF**  
**ELECTRIC MOTORS**  
**(VC 9113)**

**1. SCOPE**

- 1.1 This compulsory specification covers the efficiency requirement for electric motor, rated for operation on a sinusoidal voltage, that:
  - 1.1.1 have two (2), four (4), six (6) or eight (8) pole;
  - 1.1.2 have rated voltage  $U_n$  above 50 V and up to and including 1 000 V;
  - 1.1.3 have a rated power  $P_n$  from 0,75 kW to 375 kW ;
  - 1.1.4 are marked with any ambient temperature within the range of  $-20\text{ }^{\circ}\text{C}$  to  $+60\text{ }^{\circ}\text{C}$  (smoke extraction motors with a temperature class of up to and including  $400\text{ }^{\circ}\text{C}$  are covered by this compulsory specification).
  - 1.1.5 are marked with an altitude up to 4 000 m above sea level.
  - 1.1.6 Motors with flanges, feet and/or shafts with mechanical dimensions different from SANS 60072-1 are covered by this compulsory specification.
  - 1.1.7 Geared motors are covered by this compulsory specification including those incorporating non-standard shafts and flanges.
- 1.2 This compulsory specification does not cover the efficiency requirements of the following electric motors:
  - 1.2.1 Single-speed motors with 10 or more poles or multi-speed motors;
  - 1.2.2 Motors with mechanical commutators (such as DC motors);
  - 1.2.3 Motors completely integrated into a machine;

- 1.2.4 Brake motors when the brake is an integral part of the inner motor construction and can neither be removed nor supplied by a separate power source during the testing of motor efficiency
- 1.2.5 Motors designed to operate wholly immersed in a liquid.
- 1.2.6 Smoke extraction motors with a temperature class above 400 °C.

## 2. DEFINITIONS

- 2.1 For the purposes of this compulsory specification, the definitions in **SANS 60034-1, SANS 60034-2-1, SANS 60034-30-1, SANS 60034-30-2, SANS 1804 series, SANS 60072-1** and the following shall apply:
  - 2.1.1 **Applicant:** The manufacturer or importer seeking approval for an electric motor(s). The applicant shall be an existing legal entity within the Republic of South Africa.
  - 2.1.2 **Proof of approval:** A letter of authority (LoA) issued by the NRCS, which confirms that a particular electric motor type satisfies the requirements of this compulsory specification.
  - 2.1.3 **Declaration report:** a report that is issued by an accredited conformity assessment body, indicating the equivalence of standards.
  - 2.1.4 **NRCS:** The National Regulator for Compulsory Specifications as established by the National Regulator for Compulsory Specifications Act, 2008 (Act No. 5 of 2008).
  - 2.1.5 **Valid test report:** a copy of a full test report issued less than 36 months before the date of submission to the NRCS.
  - 2.1.6 **Electric Motor:** electric motor with attributes in section 1.1 of this compulsory specification.
  - 2.1.7 **Referenced standard:** a South African National Standard mentioned in section 4 of this compulsory specification.

### 3. GENERAL REQUIREMENTS

- 3.1 The applicant shall ensure that each type of electric motor has been approved by the NRCS before offering it for sale or import or supply, in accordance with the requirements of Annex A.
- 3.2 The applicant shall inform the NRCS of any change in design or materials affecting any mandatory requirement in terms of this compulsory specification. In the event of such change(s) the NRCS may, at its discretion, demand that the applicant submit a new application for approval.
- 3.3 The applicant shall, on request, provide the NRCS, within five (5) working days, with satisfactory proof of approval in respect of any type of electric motor included in the scope of this compulsory specification.
- 3.4 Failure to provide such proof shall constitute reasonable grounds for suspicion of non-compliance with the requirements of this compulsory specification.

### 4. SPECIFIC REQUIREMENTS

- 4.1 Electric Motors shall have a minimum efficiency class of **IE3** as specified in **SANS/IEC 60034-30-1**, *Rotating Electrical Machines-part 30-1: efficiency classes of line operated AC motors (IE code)*.
- 4.2 Electric Motors shall comply with requirements specified in **SANS/IEC 60034-2-1**, *Rotating electrical machines - Part 2-1: Standard methods for determining losses and efficiency from tests (excluding machines for traction vehicles)*,

**Alternatively**, Electric Motors shall comply with the relevant **SANS 1804 series** part of standards, *induction motors*.

### 5. EQUIVALENCE OF STANDARDS

Standards issued by different standardization bodies such as ISO and EN, will only be accepted if it is proven, in the form of a declaration report from an accredited test laboratory, that they are technically equivalent to the relevant South African National Standard. The applicant shall be responsible for obtaining such a declaration report. Proof of conformity with such a standard shall be accepted as conformity with the corresponding South African National Standard.

## 6. CONFORMITY TO REFERENCED STANDARDS

- 6.1 For the purposes of this compulsory specification, a new edition of a **referenced standard** shall become effective twelve (12) months from the date of publication as a South African National Standard.
- 6.2 Notwithstanding the provision in 6.1, products that are already compliant with the new edition of the SANS may be considered acceptable for application processes in Annex A of this compulsory specification.
- 6.3 When a new edition of a referenced standard is published, products originally approved in accordance with the previous edition of that standard may have their approval extended, subject to the requirements of Annex A, unless declared otherwise by the Minister.

## 7. EVIDENCE OF CONFORMITY

The following form of evidence shall be submitted to the NRCS as proof of conformity with the requirements of this compulsory specification:

- 7.1 Valid test reports in IEC format or any equivalent format acceptable to the NRCS and issued by an appropriately accredited and internationally recognized body being a member of an ILAC/IECEE mutual recognition scheme in accordance with the NRCS's conformity assessment policy.
- 7.2 The valid test report shall prove conformity with all the applicable mandatory requirements.
- 7.3 Evidence of conformity shall be traceable to the specific electric motor(s).

## **ANNEX A**

### **APPROVAL OF ELECTRIC MOTORS**

#### **A.1 APPLICATION FOR APPROVAL**

An application for approval of each type of electric motor intended for sale or replacement shall include:

**A.1.1** Details of the type of electric motor(s) for which approval is sought and the standard(s) to which it is claimed to conform;

**A.1.2** Details of the manufacturing plant(s) in which the electric motor type is produced;

**A.1.3** For new applications, proof of conformity, with all the requirements of this compulsory specification, issued less than 36 months before the date of submission to the NRCS;

**A.1.4** On expiry of the approval, an application for an extension may be granted, provided that all the conditions of the previous approval were met. In this case, proof of compliance, with all the requirements of the relevant compulsory specification, issued less than 60 months before the date of submission to the NRCS, shall be required;

**A.1.5** Identification markings and other information appearing on the product; and

**A.1.6** Any reasonable additional information, in order to clarify the above that may be requested by the NRCS.

## **A.2 APPROVAL**

**A.2.1** The NRCS shall assess the evidence of conformity supplied by the applicant and shall decide to grant approval or not, at its sole discretion.

**A.2.2** The NRCS shall assign a unique number to each approval.

**A.2.3** The NRCS shall issue a letter of authority certificate (LOA) for each successful application, to the applicant, when all the requirements have been met. The validity period of the LOA shall be three (3) years.

**A.2.4** The LoA may be extended for three (3) years as in A.1.4 of this compulsory specification.

**A.2.5** The approval granted with respect to each type of electric motor that is pursuant to this compulsory specification may be withdrawn at any time, after the manufacturer has been notified in writing, if the requirements have not been met or maintained.