endshields, including bearings, to create an electric motor capable of operation in accordance with the applicable nameplate ratings.

*Rated frequency* means 60 Hz and corresponds to the frequency of the electricity supplied either:

(1) Directly to the motor, in the case of electric motors capable of operating without an inverter; or

(2) To the inverter in the case on inverter-only electric motors.

*Rated load* (or *full-load*, *full rated load*, or *rated full-load*) means the rated output power of an electric motor.

*Rated voltage* means the input voltage of a motor or inverter used when making representations of the performance characteristics of a given electric motor and selected by the motor's manufacturer to be used for testing the motor's efficiency.

*Special purpose motor* means any motor, other than a general purpose motor or definite purpose motor, which has special operating characteristics or special mechanical construction, or both, designed for a particular application.

*Special purpose electric motor* means any electric motor, other than a general purpose motor or definite electric purpose motor, which has special operating characteristics or special mechanical construction, or both, designed for a particular application.

*Submersible electric motor* means an electric motor that:

(1) Is intended to operate continuously only while submerged in liquid;

(2) Is capable of operation while submerged in liquid for an indefinite period of time; and

(3) Has been sealed to prevent ingress of liquid from contacting the motor's internal parts.

*Total power loss* means that portion of the energy used by an electric motor not converted to rotational mechanical power, expressed in percent.

*Totally enclosed non-ventilated (TENV) electric motor* means an electric motor that is built in a frame-surface cooled, totally enclosed configuration that is designed and equipped to be cooled only by free convection.

[69 FR 61923, Oct. 21, 2004, as amended at 74 FR 12071, Mar. 23, 2009; 77 FR 26633, May 4, 2012; 78 FR 75993, Dec. 13, 2013; 79 FR 31009, May 29, 2014; 86 FR 21, Jan. 4, 2021; 87 FR 63654, Oct. 19, 2022; 87 FR 64689, Oct. 26, 2022]

TEST PROCEDURES, MATERIALS INCORPORATED AND METHODS OF DETERMINING EFFICIENCY

### § 431.14 [Reserved]

### § 431.15 Materials incorporated by reference.

(a) Certain material is incorporated by reference into this subpart with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the U.S. Department of Energy (DOE) must publish a document in the FEDERAL REGISTER and the material must be available to the public. All approved incorporation by reference (IBR) material is available for inspection at DOE and at the National Archives and Records Administration (NARA). Contact DOE at: the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, Sixth Floor, 950 L'Enfant Plaza SW, Washington, DC 20024, (202) 586–9127, *Buildings@ee.doe.gov*, *https://www.energy.gov/eere/buildings/building-technologies-office*. For information on the availability of this material at NARA, email: *fr.inspection@nara.gov*, or go to: *www.archives.gov/federal-register/cfr/ibr-locations.html*. The material may be obtained from the sources in the following paragraphs:

(b) *CSA.* Canadian Standards Association, Sales Department, 5060 Spectrum Way, Suite 100, Mississauga, Ontario, L4W 5N6, Canada; (800) 463–6727; *www.shopcsa.ca/onlinestore/welcome.asp*.

(1) CSA C390–10 (reaffirmed 2019), (''CSA C390–10''), *Test methods, marking requirements, and energy efficiency levels for three-phase induction motors*, including Updates No. 1 through 3, Revised January 2020; IBR approved for § 431.12 and appendix B to this subpart.

(2) CSA C747–09 (reaffirmed 2019) (''CSA C747–09''), *Energy efficiency test*

*methods for small motors*, including Update No. 1 (August 2016), October 2009; IBR approved for appendix B to this subpart.

(c) *IEC*. International Electrotechnical Commission Central Office, 3, rue de Varembé, P.O. Box 131, CH–1211 GENEVA 20, Switzerland; + 41 22 919 02 11; *webstore.iec.ch*.

(1) IEC 60034–1 Edition 12.0 2010–02, (''IEC 60034–1''), Rotating Electrical Machines, Part 1: Rating and Performance, February 2010, IBR approved as follows: section 4: Duty, clause 4.2.1 and Figure 1, IBR approved for § 431.12.

(2) IEC 60034–1, Edition 12.0 2010–02, (''IEC 60034–1:2010''), Rotating Electrical Machines—Part 1: Rating and Performance, IBR approved for appendix B to this subpart.

(3) IEC 60034–2–1:2014, *Rotating electrical machines—Part 2–1: Standard methods for determining losses and efficiency from tests (excluding machines for traction vehicles)*, Edition 2.0, 2014–06; IBR approved for § 431.12 and appendix B to this subpart.

(4) IEC 60034–12:2016, *Rotating electrical machines, Part 12: Starting performance of single-speed three-phase cage induction motors*, Edition 3.0, 2016–11; IBR approved for § 431.12.

(5) IEC 60050–411, International Electrotechnical Vocabulary Chapter 411: Rotating machines, 1996, IBR approved as follows: sections 411–33–07 and 411–37–26, IBR approved for § 431.12.

(6) IEC 60051–1:2016, Edition 6.0 2016–02, (''IEC 60051–1:2016''), Direct acting indicating analogue electrical measuring instruments and their accessories—Part 1: Definitions and general requirements common to all parts, IBR approved for appendix B to this subpart.

(7) IEC 60072–1, *Dimensions and Output Series for Rotating Electrical Machines—Part 1: Frame numbers 56 to 400 and flange numbers 55 to 1080*, Sixth edition, 1991–02; IBR approved as follows: clauses 2, 3, 4.1, 6.1, 7, and 10, and Tables 1, 2 and 4; IBR approved for § 431.12 and appendix B to this subpart.

(8) IEC 60079–7:2015, *Explosive atmospheres—Part 7: Equipment protection by increased safety ''e''*, Edition 5.0, 2015–06; IBR approved for § 431.12.

(9) IEC 61800–9–2:2017, *Adjustable speed electrical power drive systems—Part 9–2: Ecodesign for power drive systems, motor starters, power electronics and their driven applications—Energy efficiency indicators for power drive systems and motor starters*, Edition 1.0, 2017–03; IBR approved for appendix B to this subpart.

(d) *IEEE*. Institute of Electrical and Electronics Engineers, Inc., 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855–1331; (800) 678–IEEE (4333); *www.ieee.org/web/publications/home/index.html*.

(1) IEEE Std 112–2017 (''IEEE 112–2017''), *IEEE Standard Test Procedure for Polyphase Induction Motors and Generators*, approved December 6, 2017; IBR approved for § 431.12 and appendix B to this subpart.

(2) IEEE Std 114–2010 (''IEEE 114–2010''), *Test Procedure for Single-Phase Induction Motors*, December 23, 2010; IBR approved for appendix B to this subpart.

(e) *NEMA*. National Electrical Manufacturers Association, 1300 North 17th Street, Suite 1752, Rosslyn, Virginia 22209; (703) 841–3200; *www.nema.org/*.

(1) ANSI/NEMA MG 1–2016 (Revision 1, 2018) (''NEMA MG 1–2016''), *Motors and Generators*, ANSI-approved June 15, 2021; IBR approved for § 431.12 and appendix B to this subpart.

(2) NEMA Standards Publication MG1–1967 (''NEMA MG1–1967''), *Motors and Generators*, January 1968; as follows:

(i) *Part 11, Dimension;* IBR approved for § 431.12.

(ii) *Part 13, Frame Assignments—A–C Integral-Horsepower Motors;* IBR approved for § 431.12.

(f) *NFPA*. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169–7471; (617) 770–3000; *www.nfpa.org/*.

(1) NFPA 20, *Standard for the Installation of Stationary Pumps for Fire Protection*, 2022 Edition, ANSI-approved April 8, 2021. IBR approved for § 431.12.

(2) [Reserved]

[77 FR 26634, May 4, 2012, as amended at 78 FR 75994, Dec. 13, 2013; 86 FR 21, Jan. 4, 2021; 87 FR 63656, Oct. 19, 2022]