

IEEE Electric Machinery Standards Collection – Systems: VuSpec™

## IEEE Electric Machinery Standards Collection: VuSpec™

### Summary:

Electric machinery standards provide manufacturers and designers with the specifications they need to know on-the-job, while providing tests and diagnosis for various types of electric machines. This VuSpec collection contains 25 Active and 17 Archived IEEE standards, Guides and Recommended practices used worldwide pertinent to the generation of electric energy and its conversion into other forms of electric or mechanical energy. Specific topics include:

- Synchronous machines
- Induction machines
- DC and Permanent Magnet machines
- Motor generator sets -Rotating frequency changers
- Electric couplings, brakes and dynamometers
- Magneto-hydrodynamic energy conversion ducts
- Insulation, magnetic, conductor, and super conductor materials as used in electrical machinery
- Linear Electric Machinery
- Power Electronic controls for electric machinery
- Effects of power electronic controls on electric machine components.

Exclusive VuSpec bonus features include a point-and-click browser interface providing a full-text search, a glossary of terms and an index of keywords to guide you to the correct standard.

SINGLE-USER LICENSE.

Includes 25 Active and 17 Archived IEEE standards in the Electric Machinery family:

### Table of Contents:

#### Active

- IEEE Std 11-2000 (R2005), IEEE Standard for Rotating Electric Machinery for Rail and Road Vehicles
- IEEE Std 43™-2000 (R2006), IEEE Recommended Practice for Testing Insulation Resistance of Rotating Machinery
- IEEE Std 62.2™-2004 (R2009), IEEE Guide for Diagnostic Field Testing of Electric Power Apparatus
- IEEE Std 67™-2005 (R2010), IEEE Guide for Operation and Maintenance of Turbine Generators
- IEEE Std 95™-2002 (R2007), IEEE Recommended Practice for Insulation Testing of AC Electric Machinery (2300 V and Above) With High Direct Voltage
- IEEE Std 112™-2004, IEEE Standard Test Procedure for Polyphase Induction Motors and Generators
- IEEE Std 115™-2009, IEEE Guide for Test Procedures for Synchronous Machines Part I—Acceptance and Performance Testing Part II—Test Procedures and Parameter Determination for Dynamic Analysis
- IEEE Std 252™-1995 (R2007), IEEE Standard Test Procedure for Polyphase Induction Motors Having Liquid in the Magnetic Gap
- IEEE Std 286™-2000 (R2006), IEEE Recommended Practice for Measurement of Power Factor Tip-Up of Electric Machinery Stator Coil Insulation
- IEEE Std 433™-2009, IEEE Recommended Practice for Insulation Testing™ of AC Electric Machinery with High Voltage at Very Low Frequency
- IEEE Std 434™-2006, IEEE Guide for Functional Evaluation of Insulation Systems for AC Electric Machines Rated 2300 V and Above
- IEEE Std 492™-1999 (R2011), IEEE Guide for Operation and Maintenance of Hydro-Generators IEEE Std 522™-2004 (R2009), IEEE Guide for Testing Turn Insulation of Form-Wound Stator Coils for Alternating-Current Electric Machines
- IEEE Std 620™-1996 (R2008), IEEE Guide for the Presentation of Thermal Limit Curves for Squirrel Cage Induction Machines

- IEEE Std 1110™- 2002 (R2007), IEEE Guide for Synchronous Generator Modeling Practices and Applications in Power System Stability Analyses
- IEEE Std 1255™- 2000 (R2011), IEEE Guide for Evaluation of Torque Pulsations During Starting of Synchronous Motors
- IEEE 1310™-2012, IEEE Recommended Practice for Thermal Cycle Testing of Form-Wound Stator Bars and Coils for Large Generators
- IEEE Std 1415™- 2006, IEEE Guide for Induction Machinery Maintenance Testing and Failure Analysis
- IEEE Std 1434™- 2000 (R2005), IEEE Guide to the Measurement of Partial Discharges in Rotating Machinery
- IEEE Std 1553™ 2002 (R2007), IEEE Standard for Voltage Endurance Testing of Form-Wound Coils and Bars for Hydrogenerators
- IEEE 1665™-2009, IEEE Guide for the Rewind of Synchronous Generators
- 50Hz and 60 Hz/Rated 1 MVA and Above
- IEEE Std1776™- 2008, IEEE Recommended Practice for Thermal Evaluation of Unsealed or Sealed Insulation Systems for AC Electric Machinery Employing Form-Wound Pre-Insulated Stator Coils for Machines Rated 15 000 V and Below
- IEEE Std 1799™- 2012, Recommended Practice for Quality Control Testing of External Discharges on Stator Coils, Bars and Windings
- IEEE C50.12™-2005 (R2010), IEEE Standard for Salient-Pole 50 Hz and 60 Hz Synchronous Generators and Generator/Motors for Hydraulic Turbine Applications Rated 5 MVA and Above
- IEEE Std C50.13™-2005 (R2010), IEEE Standard for Cylindrical-Rotor 50 Hz and 60 Hz Synchronous Generators Rated 10 MVA and Above

#### Archived

- IEEE Std 58™-1978, IEEE Standard Induction Motor Letter Symbols
- IEEE Std 86™-1987, IEEE recommended practice: definitions of basic per-unit quantities for AC rotating machines
- IEEE Std 85™-1973, IEEE Test Procedure for Airborne Sound Measurements on Rotating Electric Machinery
- IEEE Std 432™-1992, IEEE guide for insulation maintenance for rotating electric machinery (5 hp to less than 10 000 hp)
- IEEE Std 117™-1974, Test Procedure for Evaluation of Systems of Insulating Materials for Random-Wound AC Electric Machinery
- IEEE Std 1107™- 1996, IEEE recommended practice for thermal evaluation of sealed insulation systems for AC electric machinery employing random-wound stator coils
- IEEE Std 1129™- 1992, Recommended Practice for Monitoring and Instrumentation of Turbine Generators
- IEEE Std 1310-2010, IEEE Recommended Practice for Thermal Cycle Testing of Form-Wound Stator Bars and Coils for Large Generators
- IEEE Std 792™-1988, IEEE Recommended Practice for the Evaluation of the Impulse Voltage Capability of Insulation Systems for AC Electric Machinery Employing FormWound Stator Coils
- IEEE Std 275™-1992, IEEE recommended practice for thermal evaluation of insulation systems for alternating-current electric machinery employing form-wound preinsulated stator coils for machines rated 6900 V and below
- IEEE Std 56™-1977, IEEE guide for insulation maintenance of large alternating-current rotating machinery (10,000 kVA and larger)
- IEEE Std 113™-1985, IEEE Guide: Test Procedures For Direct-current Machines
- IEEE Std 429™-1994, IEEE recommended practice for thermal evaluation of sealed insulation systems for AC electric machinery employing form-wound preinsulated stator coils for machines rated 6900 V and below
- IEEE Std 116™-1975, IEEE standard test procedure for carbon brushes
- IEEE Std 304™-1977, IEEE test procedure for evaluation and classification of insulation systems for direct-current machines
- IEEE Std 115A™-1987, IEEE standard procedures for obtaining synchronous machine parameters by standstill frequency response testing (Supplement to ANSI/IEEE Std 115-1983, IEEE guide: test procedures for synchronous machines)
- IEEE Std 252™ 1995, Standard Test Procedure for Polyphase Induction Motors having Liquid in the Magnetic Gap

**PLUS!**

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