

[Email This Letter](#)

22 March 2005

James W Wilson  
1961 Dougherty Ferry Rd.  
Kirkwood, MO 63122-3538  
jwwilson@ieee.org

Re: PC62.21.1 - Recommended Practice for the Application of Surge Voltage Protective Equipment on AC Rotating Machinery Rated 1 kV to 30 kV, Generators and Single-Turn Coil Motors

Dear James:

I am pleased to inform you that on 20 March 2005 the IEEE-SA Standards Board approved the above referenced project until 31 December 2009. A copy of the file can be found on our website at <http://standards.ieee.org/board/nes/projects/C62-21-1.pdf>.

Now that your project has been approved, please forward a roster of participants involved in the development of this project. This request is in accordance with the IEEE-SA Operations Manual, Clause 5.1.2i under Duties of the Sponsor which states:

"Submit annually to the IEEE Standards Department an electronic roster of individuals participating on standards projects"

For your convenience, an Excel spreadsheet for your use has been posted on our website at <http://standards.ieee.org/guides/par/roster.xls>. Please forward this list to me via e-mail at [j.haasz@ieee.org](mailto:j.haasz@ieee.org) no later than 18 June 2005.

Please visit our website, IEEE Standards Development Online (<http://standards.ieee.org/resources/development/index.html>), for tools, forms and training to assist you in the standards development process. Also, we strongly recommend that a copy of your draft be sent to this office for review prior to the final vote by the working group to allow for a quick review by editorial staff before sponsor balloting begins.

If you should have any further questions, please contact me at 732-562-6367 or by email at [j.haasz@ieee.org](mailto:j.haasz@ieee.org).

Sincerely,

Jodi Haasz  
Program Manager  
International Stds Programs and Governance  
Standards Activities  
Phone +1 732 562 6367  
FAX +1 732 875 0695  
Email: [j.haasz@ieee.org](mailto:j.haasz@ieee.org)

CC: [rodenberg@transtector.com](mailto:rodenberg@transtector.com), [djackson@rwbeck.com](mailto:djackson@rwbeck.com), [stds-pes-scc@ieee.org](mailto:stds-pes-scc@ieee.org)

# PAR FORM

**PAR Status:** New PAR

**PAR Approval Date:** 2005-03-20

**PAR Signature Page on File:** Yes

**1. Assigned Project Number:** PC62.21.1

**2. Sponsor Date of Request:** 2005-01-31

**3. Type of Document:** Recommended Practice for

**4. Title of Document:**

**Draft:** Recommended Practice for the Application of Surge Voltage Protective Equipment on AC Rotating Machinery Rated 1 kV to 30 kV, Generators and Single-Turn Coil Motors

**5. Life Cycle:** Full-Use

**6. Type of Project:**

**6a. Is this an update to an existing PAR?** No

**6b. The Project is a:** New Standard

**7. Working Group Information:**

**Name of Working Group:** WG 3.4.9 Surge Protection of Rotating Machinery

**Approximate Number of Expected Working Group Members:**10

**8. Contact information for Working Group Chair:**

**Name of Working Group Chair:** David W Jackson

**Telephone:** 508/935-1669 **FAX:** 508/935-1666

**Email:** djackson@rwbeck.com

**9. Contact information for Co-Chair/Official Reporter, Project Editor or Document Custodian if different from the Working Group Chair:**

**Name of Co-Chair/Official Reporter, Project Editor or Document Custodian:**

**Telephone:** **FAX:**

**Email:**

**10. Contact information for Sponsoring Society or Standards Coordinating Committee:**

**Name of Sponsoring Society and Committee:** Power Engineering Society Surge Protective Devices/High Voltage

**Name of Sponsoring Committee Chair:** Richard Odenberg

**Telephone:** 208-772-8515 **FAX:** 208-762-6163

**Email:** rodenberg@transtector.com

**Name of Liaison Rep. (if different from the Sponsor Chair):** James W Wilson

**Telephone:** 314-822-5480 **FAX:**

**Email:** jwwilson@ieee.org

**Name of Co-Sponsoring Society and Committee:****Name of Co-Sponsoring Committee Chair:****Telephone: FAX:****Email:****Name of Liaison Rep. (if different from the Sponsor Chair):****Telephone: FAX:****Email:****11. The Type of ballot is:** Individual Sponsor Ballot**Expected Date of Submission for Initial Sponsor Ballot:** March 2008**12. Projected Completion Date for Submittal to RevCom:** October 2008**Target Extension Request Information for a Modified PAR whose completion date is being extended past the original four-year life of the PAR:****13. Scope of Proposed Project:**

This recommended practice covers the application of surge voltage protective equipment to ac rotating machinery rated 1 kV to 30 kV. This recommended practice covers rotating generators with and without generator circuit breakers, and single-turn coil motors. This recommended practice extends the surge protection guidance provided for form-wound multi-turn coil motors in IEEE C62.21-2003 to cover here the insulation surge voltage withstand strength, the surge environment and the application of surge voltage protection to motors and generators with windings having single-turn coils, and the surge environment and application of surge voltage protection to generators with windings having form-wound multi-turn coils.

**Is the completion of this document contingent upon the completion of another document?**

No

**14. Purpose of Proposed Project:**

This recommended practice will aid engineers at all levels of surge protection knowledge to decide whether particular machines should have surge protection. This recommended practice may be used in estimating the surge withstand capability and switching surge exposure of ac rotating machinery in usual, not extreme exposures. The manufacturer should be contacted for specific insulation surge voltage withstand values for machinery of particular interest. For those machines that should be protected, the purpose is to describe good practice in selecting and applying surge protective devices.

**15. Reason for the Proposed Project:**

There are no existing U.S. or international guides or standards for surge protection of ac rotating machinery within the scope of this recommended practice. For designers, consultants, developers and owners of proposed generator installations such as electric generating utilities, independent power producers, merchant power plant owners, owners of on-site generation above 1000 V, this document will aid in determining if, what and how surge protection should be provided. For consultants to, and operators and maintainers of existing generators at electric generating utilities, independent power producers, merchant power plant owners, owners of on-site

generators above 1000 V, which are experiencing insulation deterioration, aging or failure this document will aid in determining appropriate measures to protect or extend life of the equipment.

**16. Intellectual Property:**

**a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR?** Yes 2004-10-13

**b. Is the sponsor aware of copyright permissions needed for this project?** Yes

There are several copyrighted IEEE and other publications for which permission may be desired and requested for abstracting text or copying figures or tables.

**c. Is the sponsor aware of trademarks that apply to this project?** No

**d. Is the sponsor aware of possible registration activity related to this project?** No

**17. Are there other documents or projects with a similar scope?** Yes

This Recommended Practice is a logical and separate extension to IEEE C62.21-2003, a Guide which covers the surge voltage insulation withstand strength of form-wound multi-turn coil rotating machines, and the surge environment and surge voltage protection of form-wound multi-turn coil motors. This Recommended Practice IEEE PC62.21.1 will complement IEEE C62.21-2003 by extending the coverage of surge voltage withstand strength, surge environment and surge protection to generators and single-turn coil machines.

**Similar Scope Project Information:**

SimSP: PE/SPD/HV SimProjNo: C62.21-2003 SimProjD: 28 April 2004 SimTitle: IEEE Guide for the Application of Surge Voltage Protective Equipment on AC Rotating Machinery 1000 V and Greater

**18. Is there potential for this document (in part or in whole) to be adopted by another national, regional or international organization?** Do not know at this time

If yes, the following questions must be answered:

**Organization Name?**

**Technical**

**Committee**

**International**

**Contact**

**Information?**

**19. Will this project result in any health, safety, or environmental guidance that affects or applies to human health or safety?** No

If yes, please explain:

**20. Sponsor Information**

**a. Is the scope of this project within the approved/scope/definition of the Sponsor's Charter?** Yes

If no, please explain:

**b. The Sponsor's procedures have been accepted by the IEEE-SA Standards Board Audit Committee?** Yes

**21. Additional Explanatory Notes: (Item Number and Explanation)**

Items 3 and 4: The choice of Recommended Practice is appropriate because there is no lack of experience in the application of surge protection for generators. There should be by now a best practice method for this protection after over 75 years of application of surge protection to Grouped and Unit Connected Generators.