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23 August 2007

Michael Wactor  
Powell Electrical Systems, Inc.  
8550 Mosley Drive  
Houston, TX 77075  
mwactor@powl.com

Re: PC37.20.6 - Standard for 4.76 kV to 38 kV Rated Ground and Test Devices Used in Enclosures

Dear Michael:

I am pleased to inform you that on 22 August 2007 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/C37-20-6.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 [s.hampton@ieee.org](mailto:s.hampton@ieee.org) no later than 20 November 2007.

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 +1 732 562 6003 or by email at [s.hampton@ieee.org](mailto:s.hampton@ieee.org).

Sincerely,

Sherry Hampton  
Administrator, Governance  
Standards Activities  
Phone +1 732 562 6003  
FAX +1 732 875 0695  
Email: s.hampton@ieee.org

CC: tburse@powl.com, stds-pes-scc@ieee.org, tburse@powl.com BCC: s.hampton@ieee.org, t.t.lee@ieee.org

**PAR Request Date:** 11 July 2007

**PAR Approval Date:** 22 August 2007

**PAR Signature Page on File:** Yes

**Type of PAR:** Modification to Approved PAR

**Status:** Modification to a Previously Approved PAR for the Revision of a Standard - PC37.20.6, 07 December 2005

**Root Project:** IEEE Std C37.20.6-1997

**1.1 Project No.:** **C37.20.6**

**1.2 Type of Document:** Standard

**1.3 Life Cycle:** Full-Use

**1.4 Is this document in ballot now?** No

## 2.1 Title

Standard for 4.76 kV to 38 kV Rated Ground and Test Devices Used in Enclosures

**3.1 Working Group Name** [4.76 kV to 38 kV Rated Grounding and Testing Devices Used in Enclosures](#)

**Working Group Chair**  
[Burse, Ted](#)  
 Phone: 713-948-4599  
 Email: tburse@powl.com

**Working Group Vice Chair**  
[Olsen, T W](#)  
 Phone: 919-365-2208  
 Email: ted.olsen@siemens.com

**3.2 Sponsor** [IEEE Power Engineering Society Switchgear \(PE/SWG\)](#)

**Sponsor Chair**  
[Burse, Ted](#)  
 Phone: 713-948-4599  
 Email: tburse@powl.com

**Name of Standards Liaison Representative (if applicable)**  
[Wactor, Michael](#)  
 Phone: 713-948-4918  
 Email: mwactor@powl.com

**3.3 Joint Sponsor**

**4.1 Type of Ballot:** Individual

**4.2 Expected Date of Submission for Initial Sponsor Ballot:** October 2007

**4.3 Projected Completion Date for Submittal to RevCom:** October 2008

**5.1 Approximate number of people expected to work on this project:** 15

**5.2 Scope:** This standard covers drawout type, indoor, medium-voltage ground and test (G&T) devices for use in drawout metal-clad switchgear rated 4.76 kV through 38 kV as described in IEEE Std C37.20.2. Four G&T device types are generally supplied for temporary circuit maintenance procedures for insertion in place of the circuit breaker as follows: a) Simple manual devices b) Complex manual devices c) Simple electrical devices d) Complex electrical devices There may be more complicated G&T devices that may include current and/or voltage transformers, glow-tubes, or other accessory components. These more complex devices are not covered by this standard. Due to their complexity, additional testing and interlocking are required and manufacturers should be consulted for the availability and ratings of these types of devices.

**Old Scope:** This standard covers drawout type, indoor medium-voltage grounding and testing (G&T) devices for use in drawout metal-clad switchgear rated above 4.76 kV through 38 kV as described in IEEE Std C37.20.2-1999. Three G&T device types are generally supplied for temporary circuit maintenance procedures for insertion in place of the circuit breaker as follows: a) Simple manual devices b) Simple electrical devices c) Complex electrical devices There may be more complex G&T devices that may include current and/or voltage transformers, glow-tubes, or other accessory components and may also have the ability to interrupt short-circuit current. These more complex devices are not addressed by this standard. Due to their complexity, additional testing and interlocking are required and manufacturers should be consulted for the availability and ratings of these types of devices.

**5.3 Is the completion of this document contingent upon the completion of another document?** No

**5.4 Purpose:** Although G&T devices have been used as accessory devices in metal-clad switchgear for decades, they were not addressed in the standards until IEEE C37.20.6-1997 was approved. This is because they are specialized accessory devices, designed and tested in accordance with applicable sections of circuit breaker standards, and based on user-unique operational requirements. This revised standard complements IEEE Std C37.20.2, IEEE Standard for Metal-Clad Switchgear, and addresses the more common G&T device types. This standard also clarifies that G&T devices are not required to have the interrupting and continuous current ratings of the circuit breakers they may temporarily replace for the purpose of grounding and testing medium-voltage circuits.

**Old Purpose:** Although grounding and testing devices (G&T) have been used as accessory devices in metal-clad switchgear for decades, they were not addressed in the standards until the IEEE C37.20.6-1997 was approved. This is because they are specialized accessory devices, designed and tested in accordance with applicable sections of circuit breaker standards, and based on user-unique operational requirements. This revised standard complements IEEE Std C37.20.2-1999, IEEE Standard for Metal-Clad Switchgear, and addresses the more popular G&T device types. This standard also clarifies that G&T devices are not required to have the interrupting and continuous current ratings of the circuit breakers they may temporarily replace for the purpose of grounding and testing medium-voltage circuits.

**5.5 Need for the Project:** IEEE C37.20.6 was published in 1997. Since that time, IEEE C37.04-1999 (Standard Rating Structure for AC High-Voltage Circuit Breakers), ANSI C37.06-2000 (AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis—Preferred Ratings and Related Required Capabilities), IEEE C37.09-1999 (Standard Test Procedure for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis), and IEEE C37.20.2 (Standard for Metal-Clad Switchgear) have undergone major revisions. The revisions to those documents include new ratings and test requirements for the circuit breakers that G&T devices are intended to temporarily replace. This revision will update the current document to reflect those changes. An outdated impulse test procedure (3 X 3) will be revised to the present procedure (3 X 9) which was recently recognized in IEC 62271-1 (High-voltage switchgear and controlgear - Part 1: Common specifications). Devices with circuit breaker characteristics, such as interrupting capability, are now available in the market, but are not currently included in the standard. The revision will include definitions, rating and test requirements for such devices. The revision will also consider changes that might be appropriate resulting from ballot comments received with the reaffirmation ballot (in 2002) for the 1997 document. Stakeholders include users, specifiers, manufacturers, and third-party certification agencies involved with ground and test devices.

**5.6 Stakeholders for the Standard:** Manufacturers and users of equipment designed and tested per IEEE C37.20.2, IEEE Standard for Metal-Clad Switchgear.

**6.1.a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR prior to the PAR submittal to the IEEE-SA Standards Board?** Yes **Presented Date:** 2005-10-14  
If no, please explain:

**6.1.b. Is the Sponsor aware of any copyright permissions needed for this project?** No  
If yes, please explain:

**6.1.c. Is the Sponsor aware of possible registration activity related to this project?** No  
If yes, please explain:

**7.1 Are there other standards or projects with a similar scope? No**

**If yes, please explain:**

**Sponsor Organization:**

**Project/Standard Number:** PC37.20.6

**Project/Standard Date:** 2005-12-07

**Project/Standard Title:** Standard for 4.76kV to 38kV Rated Ground and Test Devices Used in Enclosures.

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

**Technical Committee Name and Number:**

**Contact person:**

**Contact person Phone Number:**

**Contact person Email Address:**

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

**7.4 Additional Explanatory Notes:**

Title - Changed "grounding and testing devices" to "ground and test devices". 5.2 - Changed "grounding and testing devices" to "ground and test devices". Added complex manual devices. Deleted text which excluded devices with interrupting capability. 5.4 - Changed "grounding and testing devices" to "G&T devices". Also changed the descriptor "popular" to "common". Changed to "Ground and Test Devices" as the more widely accepted term and expanded scope to include devices with interrupting capability.

**8.1 Sponsor Information:**

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

If no, please explain:

[Email This Letter](#)

12 December 2005

M. Dean Sigmon  
ABB Inc.  
2300 Mechanicsville Road  
Florence, SC 29501-0524  
michael.d.sigmon@us.abb.com

Re: PC37.20.6 - Standard for 4.76 kV to 38 kV Rated Grounding and Testing Devices  
Used in Enclosures

Dear M. Dean:

I am pleased to inform you that on 07 December 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/C37-20-6.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 07 March 2006.

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  
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# PAR FORM

**PAR Status:** Revision PAR

**PAR Approval Date:** 07 December 2005

**PAR Signature Page on File:** Yes

**1. Assigned Project Number:** PC37.20.6

**2. Sponsor Date of Request:** 2005-10-14

**3. Type of Document:** Standard for

**4. Title of Document:**

**Draft:** Standard for 4.76 kV to 38 kV Rated Grounding and Testing Devices Used in Enclosures

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

**6. Type of Project:**

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

**6b. The Project is a:** Revision of Std C37.20.6-1997

**7. Working Group Information:**

**Name of Working Group:** 4.76 kV to 38 kV Rated Grounding and Testing Devices Used in Enclosures

**Approximate Number of Expected Working Group Members:**7

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

**Name of Working Group Chair:** Ted Burse

**Telephone:** 713-948-4599 **FAX:** 713-948-4512

**Email:** tburse@powl.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:** T. W. Olsen

**Telephone:** 919-365-2208 **FAX:** 919-365-1208

**Email:** t.olsen@ieee.org

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

**Name of Sponsoring Society and Committee:** IEEE Power Engineering Society Switchgear

**Name of Sponsoring Committee Chair:** Jeffrey H Nelson

**Telephone:** 423 751 8275 **FAX:** 423 751 6238

**Email:** jeffnelson@ieee.org

**Name of Liaison Rep. (if different from the Sponsor Chair):** M. Dean Sigmon

**Telephone:** 843-413-4707 **FAX:** 843-413-4850

**Email:** michael.d.sigmon@us.abb.com

**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:** October 2007

**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 standard covers drawout type, indoor medium-voltage grounding and testing (G&T) devices for use in drawout metal-clad switchgear rated above 4.76 kV through 38 kV as described in IEEE Std C37.20.2-1999. Three G&T device types are generally supplied for temporary circuit maintenance procedures for insertion in place of the circuit breaker as follows: a) Simple manual devices b) Simple electrical devices c) Complex electrical devices There may be more complex G&T devices that may include current and/or voltage transformers, glow-tubes, or other accessory components and may also have the ability to interrupt short-circuit current. These more complex devices are not addressed by this standard. Due to their complexity, additional testing and interlocking are required and manufacturers should be consulted for the availability and ratings of these types of devices.

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

No

**14. Purpose of Proposed Project:**

Although grounding and testing devices (G&T) have been used as accessory devices in metal-clad switchgear for decades, they were not addressed in the standards until the IEEE C37.20.6-1997 was approved. This is because they are specialized accessory devices, designed and tested in accordance with applicable sections of circuit breaker standards, and based on user-unique operational requirements. This revised standard complements IEEE Std C37.20.2-1999, IEEE Standard for Metal-Clad Switchgear, and addresses the more popular G&T device types. This standard also clarifies that G&T devices are not required to have the interrupting and continuous current ratings of the circuit breakers they may temporarily replace for the purpose of grounding and testing medium-voltage circuits.

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

IEEE C37.20.6 was published in 1997. Since that time, IEEE C37.04-1999 (Standard Rating Structure for AC High-Voltage Circuit Breakers), ANSI C37.06-2000 (AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis—Preferred Ratings and Related Required Capabilities), IEEE C37.09-1999 (Standard Test Procedure for AC High-Voltage Circuit

Breakers Rated on a Symmetrical Current Basis), and IEEE C37.20.2 (Standard for Metal-Clad Switchgear) have undergone major revisions. The revisions to those documents include new ratings and test requirements for the circuit breakers that G&T devices are intended to temporarily replace. This revision will update the current document to reflect those changes. An outdated impulse test procedure (3 X 3) will be revised to the present procedure (3 X 9) which was recently recognized in IEC 62271-1 (High-voltage switchgear and controlgear - Part 1: Common specifications). Devices with circuit breaker characteristics, such as interrupting capability, are now available in the market, but are not currently included in the standard. The revision will include definitions, rating and test requirements for such devices. The revision will also consider changes that might be appropriate resulting from ballot comments received with the reaffirmation ballot (in 2002) for the 1997 document. Stakeholders include users, specifiers, manufacturers, and third-party certification agencies involved with ground and test devices.

#### **16. Intellectual Property:**

- a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR?** Yes 2005-10-14
- b. Is the sponsor aware of copyright permissions needed for this project?** No
- 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?** No

#### **Similar Scope Project Information:**

**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)**

Item #13 - Updated the reference and made a minor editorial change from the original scope.

Item #14 - C37.20.6-1997 did not contain a Purpose Clause.