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28 February 2007

Innocent Kamwa
Hydro Quebec Technology Group (IREQ)
Logiciels de Reseaux
1800 Lionel Boulet
Varenes, Quebec J3X 1S1
Canada
kamwa.innocent@ireq.ca

Re: P1776 - 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 15000 V and Below

Dear Innocent:

I am pleased to inform you that on 27 February 2007 the IEEE-SA Standards Board approved the above referenced project until 31 December 2010. A copy of the file can be found on our website at <http://standards.ieee.org/board/nes/projects/1776.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 no later than 28 May 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.

Sincerely,

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

CC: kerszei@sce.songs.com, stds-pes-scc@ieee.org, 229@ieee.org BCC: s.hampton@ieee.org, t.t.lee@ieee.org

PAR Request Date: 10 November 2006

PAR Approval Date: 27 February 2007

PAR Signature Page on File: Yes

Type of PAR: Modification to Approved PAR

Status: Modification to a Previously Approved PAR P1776, 15 September 2006

Root Project: New Project

1.1 Project No.: **1776**

1.2 Type of Document: Recommended Practice

1.3 Life Cycle: Full-Use

1.4 Is this document in ballot now? No

2.1 Title

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 15000 V and Below

3.1 Working Group Name [Working Group for Thermal Evaluation of Insulation Systems](#)

Working Group Chair

[Wilson, Charles A](#)
Phone: +1-512-869-8451
Email: 229@ieee.org

Working Group Vice Chair

[Frost, Nancy](#)
Phone: +1 518 344 7124
Email: nancy.frost@vonroll.com

3.2 Sponsor [IEEE Power Engineering Society Electric Machinery \(PE/EM\)](#)

Sponsor Chair

[Kerszenbaum, Isidoro](#)
Phone: +1 949 368 6217
Email: kerszei@sce.songs.com

Name of Standards Liaison Representative (if applicable)

[Kamwa, Innocent](#)
Phone: 450-652-8122
Email: kamwa.innocent@ireq.ca

3.3 Joint Sponsor

4.1 Type of Ballot: Individual

4.2 Expected Date of Submission for Initial Sponsor Ballot: July 2008

4.3 Projected Completion Date for Submittal to RevCom: July 2009

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

5.2 Scope: This recommended practice outlines test procedures for comparing two or more insulation systems in accordance with their expected life at rated temperature. The procedure is limited to insulation systems for ac electrical machines using form-wound preinsulated stator coils rated 15000 V and below. This procedure does not cover special requirements, such as those for machines enclosed in gas atmospheres or machines subjected to strong chemicals or submersion in liquid, etc. The procedure includes instructions for testing candidate systems in comparison with known systems having a proven record of service experience and interpreting the results of these tests.

Old Scope: This recommended practice outlines test procedures for comparing two or more insulation systems in accordance with their expected life at rated temperature. The procedure is limited to insulation systems for ac electrical machines using form-wound preinsulated stator coils rated 15000 V and below. This procedure does not cover special requirements, such as those for machines enclosed in gas atmospheres or machines subjected to strong chemicals or submersion in liquid, etc. The procedure includes instructions for testing candidate systems in comparison with known systems having a proven record of service experience and interpreting the results of these tests.

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

5.4 Purpose: This document combines the procedures given in IEEE Std 275-1992 (unsealed systems) with those of IEEE Std 429-1994(sealed systems). The purpose of this procedure is to classify insulation systems for the machinery used in normal service and machinery used in severe environmental conditions (and falling within the scope of this recommended practice) in accordance with their temperature capabilities by test, rather than by chemical composition. Data from such tests may be used to establish the temperature classification of new insulation systems before they are service-proven. In order to provide data from which a base of reference for temperature classification can be established, service-proven systems should also be tested according to this test procedure.

Old Purpose: This document combines the procedures given in IEEE Std 275-1992 (unsealed systems) with those of IEEE Std 429-1994(sealed systems). The purpose of this procedure is to classify insulation systems for the machinery used in normal service and machinery used in severe environmental conditions (and falling within the scope of this recommended practice) in accordance with their temperature capabilities by test, rather than by chemical composition. Data from such tests may be used to establish the temperature classification of new insulation systems before they are service-proven. In order to provide data from which a base of reference for temperature classification can be established, service-proven systems should also be tested according to this test procedure.

5.5 Need for the Project: The original scope and purpose of the documents are being maintained and the document is being revised to bring it up to date. It will be actively used in the industry to evaluate the temperature class of form wound stator insulation systems.

5.6 Stakeholders for the Standard: The stakeholders for this project are manufacturers and users of large (form wound) electric motors and generators.

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:** 2006-07-18

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? Yes

If yes, please explain:

275-1992 was created for unsealed systems and includes less stringent requirements for the unsealed insulation systems. 429-1994 was created from 275 and included more stringent requirements for sealed insulation systems. This new standard combines the features of both these standards into one document and adds higher temperature classes and voltage classes.

Sponsor Organization: Insulation Sub-Committee

Project/Standard Number: 429-1994

Project/Standard Date: 1994-01-01

Project/Standard Title: IEEE Recommended Practice for Thermal Evaluation of Sealed Insulation Systems for AC Electric Machinery Employing Form-Wound Pre-insulated Stator Coils for Machines Rated 6900 V and Below

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:

Reversed the words 'Unsealed and Sealed' in the title and changed the word 'and' to 'or'. Made a minor editorial change to the Need for Project.

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](#)

15 September 2006

Innocent Kamwa
Hydro Quebec (IREQ)
Logiciels de Reseaux
1800 Lionel Boulet
Varenes, Quebec J3X 1S1
Canada
kamwa.innocent@ireq.ca

Re: P1776 - Recommended Practice for Thermal Evaluation of Sealed and Unsealed Insulation Systems for AC Electric Machinery Employing Form-Wound Pre-insulated Stator Coils for Machines Rated 15000 V and Below

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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:

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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 no later than 14 December 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 +1 732 562 6003 or by email at 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: kerszei@sce.songs.com, stds-pes-scc@ieee.org, insxint@cox.net

PAR Request Date: 20 July 2006**PAR Approval Date:** 15 September 2006**PAR Signature Page on File:** Yes**Type of PAR:** New IEEE Standard**Status:** PAR for a New IEEE Standard**Root Project:****1.1 Project No.:** **P1776****1.2 Type of Document:** Recommended Practice**1.3 Life Cycle:** Full-Use**1.4 Is this document in ballot now?** No**2.1 Title**

Recommended Practice for Thermal Evaluation of Sealed and Unsealed Insulation Systems for AC Electric Machinery Employing Form-Wound Pre-insulated Stator Coils for Machines Rated 15000 V and Below

2.1 Amendment/Corrigenda Title**3.1 Working Group Name** [Working Group for Thermal Evaluation of Insulation Systems](#)**Working Group Chair**
[Wilson, Charles A](#)
Phone: +1-512-869-8451
Email: insxint@cox.net**Working Group Vice Chair**
[Frost, Nancy](#)
Phone: +1 518 344 7124
Email: nancy.frost@vonroll-isola.com**3.2 Sponsor** [IEEE Power Engineering Society Electric Machinery \(PE/EM\)](#)**Sponsor Chair**
[Kerszenbaum, Isidoro](#)
Phone: +1 949 368 6217
Email: kerszei@sce.songs.com**Name of Standards Liaison Representative (if applicable)**
[Kamwa, Innocent](#)
Phone: 514-652-8122
Email: kamwa.innocent@ireq.ca**3.3 Joint Sponsor****4.1 Type of Ballot:** Individual**4.2 Expected Date of Submission for Initial Sponsor Ballot:** July 2008**4.3 Projected Completion Date for Submittal to RevCom:** July 2009**5.1 Approximate number of people expected to work on this project:** 15**5.2 Scope:** This recommended practice outlines test procedures for comparing two or more insulation systems in accordance with their expected life at rated temperature. The procedure is limited to insulation systems for ac electrical machines using form-wound preinsulated stator coils rated 15000 V and below. This procedure does not cover special requirements, such as those for machines enclosed in gas atmospheres or machines subjected to strong chemicals or submersion in liquid, etc. The procedure includes instructions for testing candidate systems in comparison with known systems having a proven record of service experience and interpreting the results of these tests.

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275-1992 was created for unsealed systems and includes less stringent requirements for the unsealed insulation systems. 429-1994 was created from 275 and included more stringent requirements for sealed insulation systems. This new standard combines the features of both these standards into one document and adds higher temperature classes and voltage classes.

Sponsor Organization:

Project/Standard Number: 429-1994

Project/Standard Date: 1994-01-01

Project/Standard Title: IEEE Recommended Practice for Thermal Evaluation of Sealed Insulation Systems for AC Electric Machinery Employing Form-Wound Pre-insulated Stator Coils for Machines Rated 6900 V and Below

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:

Referenced in Item 5.4:

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 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

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: