

DATE: March 5, 2005

TO: Members of IEEE Transformers Committee, March, 2005 Meeting @ Jackson, MS

FROM: Bill Chiu, Standards Subcommittee Chair
IEEE /PES Transformers Committee

SUBJECT: Standards Activities Since the October, 2004 Meeting

TRANSFORMERS STANDARDS STATUS

The transformers standards status is given with one attachment entitled IEEE/PES Transformers Committee Status Report of Standards, Dated 3/5/2005.

The report is a list of all the transformer related standards under the sponsorship of IEEE Power Engineering Society Transformers Committee (IEEE PE/TR). The standards are grouped by Subcommittees and sorted by document numbers. The report also contains the active PARs under the responsible Subcommittee. The standards that are not yet assigned to a subcommittee are temporarily listed under the Standards Subcommittee.

IEEE/IEC DUAL LOGO STANDARDS

IEEE Std **C57.153-2001** Guide for the Application, Specification, and Testing of Phase-Shifting Transformers has been approved by the IEC TC 14 as of December, 2004. The corresponding IEC document number is:

IEC 62032 Ed. 1: Guide for the Application, Specification, and Testing of Phase-Shifting Transformers (IEEE Std. **C57.135-2001**)

DOCUMENTS PROCESSED BY THE IEEE STANDARDS BOARD

The following sections list all of the documents submitted to the New Standards Committee (NesCom) and the Standards Review Committee (RevCom) of the Standards Board since the October, 2004.

NEW STANDARDS COMMITTEE (NesCom)

EXISTING PARS – EXTENSION & MODIFICATION

PC57.15 (PE/TR) Standard Requirements, Terminology, and Test Code for Step-Voltage Regulators

Recommendation: Approve target extension request until December 2006. (12/7/04)

PC57.19.00 (PE/TR) Standard General Requirements and Test Procedure for Power Apparatus Bushings

Recommendation: Approve target extension request until December 2005. (12/7/04)

NEW PARS - REVISIONS OF EXISTING STANDARDS

PC57.110 (PE/TR) Recommended Practice for Establishing Liquid-Filled and Dry-Type Power and Distribution Transformer Capability When Supplying Nonsinusoidal Load Currents (Deferred from the September 2004 NesCom meeting)

Recommendation: Approve PAR for the revision of a standard until December 2008. (11/10/2004)

NEW PARS - NEW STANDARDS

PC57.150 (PE/TR) Guide for the Transportation of Transformers and Reactors Rated 10,000 kVA or larger

Recommendation: Approve new PAR until December 2008. (11/10/2004)

ADMINISTRATIVELY WITHDRAWN PARS

PC57.12.25 (PE/TR) Standard for Pad-Mounted, Compartmental-Type, Self-Cooled, Single-Phase Distribution Transformers with Separable Insulated High-Voltage Connectors; High Voltage, 34500 GrdY/19920 Volts and Below, Low Voltage, 240/120 Volts; 167 kVA and Smaller - Requirements

Recommendation: Approve administrative withdrawal. (12/7/04)

PC57.12.33 (PE/TR) Guide for Distribution Transformer Loss Evaluation

Recommendation: Approve administrative withdrawal. (12/7/04)

PC57.145 (PE/TR) Guide for the Definition of Thermal Duplicate Liquid-Immersed Distribution, Power, and Regulating Transformers

Recommendation: Approve administrative withdrawal. (12/7/04)

STANDARDS REVIEW COMMITTEE (RevCom)

NEW & REVISED STANDARDS

PC57.19.00/D6.1 (PE/TR) Standard General Requirements and Test Procedure for Power Apparatus Bushings

Recommendation: APPROVE (12/7/2004)

5-YEAR REVIEW

638-1992 (R1999) IEEE Standard for Qualification of Class 1E Transformers for Nuclear Power Generating Stations

Sponsor requests an extension to determine whether to revise or reaffirm the standard.

Recommendation (From December 2004): Extend until March 2005.

C57.105-1978 (R1999) IEEE Guide for Application of Transformer Connections in Three-Phase Distribution Systems

Sponsor requests an extension to determine whether to revise or reaffirm the standard.

Recommendation (From December 2004): Extend until March 2005.

C57.117-1986 (R1998) IEEE Guide for Reporting Failure Data for Power Transformers and Shunt Reactors on Electric Utility Power Systems

Sponsor requests an extension to determine whether to revise or reaffirm the standard.

Recommendation (From December 2004): Extend until March 2005.

C57.125-1991 (R1998) IEEE Guide for Failure Investigation, Documentation, and Analysis for Power Transformers and Shunt Reactors

Sponsor requests an extension to determine whether to revise or reaffirm the standard.

Recommendation (From December 2004): Extend until March 2005.

1276-1997 IEEE Guide for the Application of High-Temperature Insulation Materials in Liquid-Immersed Power Transformers

Sponsor states that a reaffirmation ballot is in progress.

Recommendation: Extend until December 2005.

C57.15-1999 IEEE Standard Requirements, Terminology, and Test Code for Step-Voltage Regulators

Sponsor has submitted a PAR extension request to NesCom for revision project PC57.15.

Recommendation: Extend until the expiration of the PAR for PC57.15 [December 2006].

C57.100-1999 IEEE Standard Test Procedure for Thermal Evaluation of Liquid-Immersed Distribution and Power Transformers

Sponsor has submitted a PAR for revision to NesCom.

Recommendation: Extend until the expiration of the PAR for PC57.100 [December 2008].

C57.121-1998 IEEE Guide for Acceptance and Maintenance of Less-Flammable Hydrocarbon Fluid in Transformers

Sponsor states that a reaffirmation ballot is in progress.

Recommendation: Extend until December 2005.

C57.138-1998 IEEE Recommended Practice for Routine Impulse Test for Distribution Transformers

Sponsor states that a reaffirmation ballot is in progress.

Recommendation: Extend until December 2005.

PARS DUE TO EXPIRE AT THE END OF 2005

- PC57.12.00** IEEE Standard General Requirements For Liquid-Immersed Distribution, Power, and Regulating Transformers
- PC57.12.01** IEEE Standard General Requirements for Dry-Type Distribution and Power Transformers Including Those with Solid Cast and/or Resin Encapsulated Windings
- PC57.12.20** Standard for Overhead Type Distribution Transformers, 500 kVA and Smaller, High-Voltage 34 500 Volts and Below; Low-Voltage, 7970/13 800 Y Volts and Below
- PC57.12.37** Standard for the Electronic Reporting of Distribution Transformer Test Data
- PC57.12.40** Requirements for Secondary Network Transformers, Subway and Vault Types (Liquid-Immersed)
- PC57.12.90** IEEE Standard Test Code for Liquid-Immersed Distribution, Power, and Regulating Transformers
- PC57.19.00** Standard General Requirements and Test Procedure for Power Apparatus Bushings
- PC57.104** IEEE Guide for the Interpretation of Gases Generated in Oil-Immersed Transformers
- PC57.130** IEEE Trial-Use Guide for the Use of Dissolved Gas Analysis During Factory Temperature Rise Tests for the Evaluation of Oil-Immersed Transformers and Reactors
- PC57.140** Evaluation and Reconditioning of Liquid Immersed Power Transformers
- PC57.145** Guide for the Definition of Thermal Duplicate Liquid-Immersed Distribution, Power, and Regulating Transformers

If the projects will not be submitted to RevCom in time for the December 2005 meeting, you have the following options:

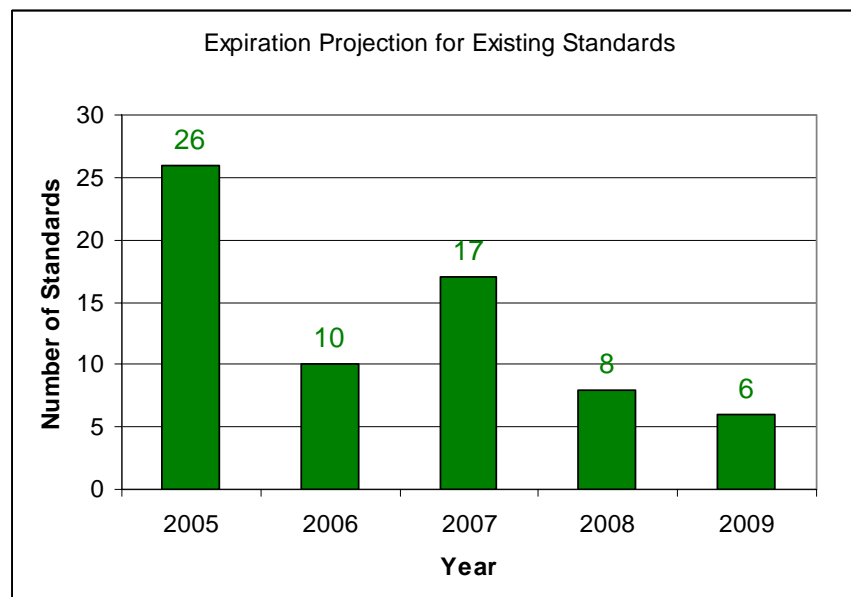
1. Request an extension for the projects. The Target Extension Request Form can be found at <http://standards.ieee.org/guides/par/extension.rtf>. Please note that this extension request can now be from one to four years.
2. Request withdrawal of the projects.

If there is no response by **17 October 2005**, the projects will be recommended for administrative withdrawn at the 6 December 2005 IEEE-SA Standards Board meeting.

STANDARDS DUE TO EXPIRE AT THE END OF 2005

- IEEE 62** IEEE Guide for Diagnostic Field Testing of Power Apparatus - Part 1: Oil Filled Power Transformers, Regulators, and Reactors
- IEEE 638** IEEE Standard for Qualification of Class 1E Transformers for Nuclear Power Generating Stations
- IEEE 1276** IEEE Guide for the Application of High-Temperature Insulation Materials in Liquid-Immersed Power Transformers
- IEEE 1277** IEEE General Requirements and Test Code for Dry-Type and Oil-Immersed Smoothing Reactors for DC Power Transmission
- IEEE 1388** IEEE Standard for the Electronic Reporting of Transformer Test Data
- IEEE 1538** IEEE Guide for Determination of Maximum Winding Temperature Rise in Liquid Filled Transformer
- C57.12.00** IEEE Standard General Requirements For Liquid-Immersed Distribution, Power, and Regulating Transformers
- C57.12.01** IEEE Standard General Requirements for Dry-Type Distribution and Power Transformers Including Those with Solid Cast and/or Resin Encapsulated Windings

- C57.12.20** Standard for Overhead Type Distribution Transformers, 500 kVA and Smaller, High-Voltage 34 500 Volts and Below; Low-Voltage, 7970/13 800 Y Volts and Below
- C57.12.40** Standard for Requirements for Secondary Network Transformers - Subway and Vault Types (Liquid Immersed)
- C57.12.70** IEEE Standard Terminal Markings and Connections for Distribution and Power Transformers
- C57.12.90** IEEE Standard Test Code for Liquid-Immersed Distribution, Power, and Regulating Transformers
- C57.19.01** IEEE Standard Performance Characteristics and Dimensions for Outdoor Apparatus Bushings
- C57.94** IEEE Recommended Practice for Installation, Application, Operation, and Maintenance of Dry-Type General Purpose Distribution and Power Transformers
- C57.104** IEEE Guide for the Interpretation of Gases Generated in Oil-Immersed Transformers
- C57.105** IEEE Guide for Application of Transformer Connections in Three-Phase Distribution Systems
- C57.109** IEEE Guide for Liquid-Immersed Transformers Through-Fault-Current Duration
- C57.116** IEEE Guide for Transformers Directly Connected to Generators
- C57.117** IEEE Guide for Reporting Failure Data for Power Transformers and Shunt Reactors on Electric Utility Power Systems
- C57.120** IEEE Loss Evaluation Guide for Power Transformers and Reactors
- C57.121** IEEE Guide for Acceptance and Maintenance of Less-Flammable Hydrocarbon Fluid in Transformers
- C57.125** IEEE Guide for Failure Investigation, Documentation, and Analysis for Power Transformers and Shunt Reactors
- C57.127** IEEE Guide for the Detection of Acoustic Emissions from Partial Discharges in Oil-Immersed Power Transformers
- C57.134** IEEE Guide for Determination of Hottest Spot Temperature in Dry Type Transformers
- C57.136** IEEE Guide for Sound Level Abatement and Determination for Liquid- Immersed Power Transformers and Shunt Reactors Rated Over 500 kVA
- C57.138** IEEE Recommended Practice for Routine Impulse Test for Distribution Transformers



INVITAION TO BALLOT STATUS – 2004 and 2005, SORTED BY INVITATION NUMBER (As of 2/11/2005)

Invitation Number	Sponsor (Soc/Com)	Working Group Chair	Invitation Open Date	Invitation Close Date	Invitations Sent Out	Type of Invitation
PC57.104	PE/TR	Frank Heinrichs (frankus1@earthlink.net)	27-Apr-04	27-May-04	729	Electronic
PC57.12.20	PE/TR	Alan Wilks (awilks@ermco-eci.com)	3-Feb-04	4-Mar-04	673	Electronic
PC57.12.28/D1.9	PE/TR	Robert C. Olen (rolen@cooperpower.com)	18-May-04	17-Jun-04	729	Electronic
PC57.12.29/D1.4	PE/TR	Robert C. Olen (rolen@cooperpower.com)	18-May-04	17-Jun-04	729	Electronic
PC57.12.37	PE/TR	Richard Hollingsworth (rhollin@howard-ind.com)	13-Nov-03	13-Dec-03	658	Electronic
PC57.12.40	PE/TR	Brian Klaponski (brian.klaponski@carte.ca)	4-Oct-04	2-Nov-04	703	Electronic
PC57.12.44/D1.9 Rev.	PE/TR	Daniel Mulkey (dhmulkey@ieee.org)	8-Jul-04	7-Aug-04	737	Electronic
PC57.146	PE/TR	William H. Bartley (william_bartley@hsb.com)	19-Feb-04	20-Mar-04	675	Electronic
Std. C57.96-1999 Reaff	PE/TR	Michael E. Haas (mehaas@ieee.org)	21-Nov-03	21-Dec-03	663	Electronic

BALLOT STATUS – 2004 and 2005, SORTED BY BALLOT NUMBER (As of 2/22/2005)

Ballot Number	Sponsor (Soc/Com)	Type of Ballot	Ballot Opened	Sched. Close Date	# Ballots	Balloting Results			Type of Ballot
						Affirm	Neg	Abstain	
C57.144/D5	PE/TR	Recirc	8-Apr-04	8-May-04	120	100%	0%	2%	Electronic
PC57.104/D11d	PE/TR	Rev	6-Jul-04	5-Aug-04	138	85%	5%	3%	Electronic
PC57.12.20/10c	PE/TR	Rev. Recirc	19-Jan-05	18-Feb-05	81	97%	3%	3%	Electronic
PC57.12.20/D10b	PE/TR	Rev	13-Apr-04	13-May-04	81	95%	5%	3%	Electronic
PC57.12.28/D1.9	PE/TR	Revision	15-Jul-04	14-Aug-04	79	98%	2%	1%	Electronic
PC57.12.28/D2.0	PE/TR	Rev Recirc	28-Dec-04	27-Jan-05	79	100%	0%	1%	Electronic
PC57.12.29/D1.4	PE/TR	Revision	15-Jul-04	14-Aug-04	70	100%	0%	1%	Electronic
PC57.12.29/D1.5	PE/TR	Rev Recirc	28-Dec-04	27-Jan-05	70	100%	0%	1%	Electronic
PC57.12.34/D10	PE/TR	New	3-Feb-04	15-Mar-04	90	95%	5%	4%	Electronic
PC57.12.34/D11	PE/TR	Recirc	18-Jun-04	28-Jun-04	90	97%	3%	4%	Electronic
PC57.12.37/D11a	PE/TR	New	26-Mar-04	25-Apr-04	78	96%	4%	3%	Electronic
PC57.12.40/D2	PE/TR	Revision	28-Dec-04	27-Jan-05	71	98%	2%	1%	Electronic
PC57.12.44/D1.9	PE/TR	Rev	8-Sep-04	8-Oct-04	53	97%	3%	4%	Electronic
PC57.12.44/D2	PE/TR	Recirc	2-Feb-05	4-Mar-05	53				Electronic
PC57.13.2/D3	PE/TR	Rev	23-Mar-04	22-Apr-04	70	96%	4%	3%	Electronic
PC57.13.2/D4	PE/TR	Rev. Recirc	5-Jan-05	4-Feb-05	70	98%	2%	3%	Electronic
PC57.13.6/D2	PE/TR	Recirc	15-Jul-04	14-Aug-04	82	97%	3%	5%	Electronic
PC57.13.6/D3	PE/TR	2nd Recirc	13-Jan-05	12-Feb-05	82	97%	3%	5%	Electronic
PC57.130/D14	PE/TR	New	23-Mar-04	22-Apr-04	128	90%	10%	3%	Electronic
PC57.130/D15	PE/TR	Recirc	30-Sep-04	30-Oct-04	128	94%	6%	3%	Electronic
PC57.146/D3	PE/TR	New	5-Apr-04	5-May-04	72	96%	4%	4%	Electronic
PC57.19.00/D6.1	PE/TR	Recirc	12-Aug-04	11-Sep-04	89	95%	5%	2%	Electronic
Std. 259-1999	PE/TR	Reaff	12-Dec-03	11-Jan-04	56	100%	0%	2%	Electronic
Std. C57.121-1998	PE/TR	Reaff	21-Jan-04	20-Feb-04	73	100%	0%	1%	Electronic
Std. C57.96-1999	PE/TR	Reaff	5-Jan-04	4-Feb-04	70	100%	0%	1%	Electronic

2005 STANDARDS BOARD MEETINGS SCHEDULE AND SUBMITTAL DEADLINES

2005

Proposed IEEE Standards Association Meeting Schedule

Jan 2005							Feb 2005							Mar 2005							Apr 2005							May 2005							Jun 2005										
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Meeting Dates

March 19, 2005
June 8, 2005
September 21, 2005
December 6, 2005

Deadline for Submittal of PAR⁽¹⁾ or Draft Standard⁽²⁾

February 4, 2005
April 29, 2005
August 12, 2005
October 17, 2005

- 1) A PAR must be sent to the Standards Subcommittee Chair before the stated deadline.
- 2) Standards must be submitted directly to the IEEE Standards Department by the Working Group Chair before the stated deadline to be considered at the next Standards board Meeting.

For current PAR form: <http://standards.ieee.org/guides/par/index.html>.

Target Extension Request form: <http://standards.ieee.org/guides/par/extension.html>.

CURRENT LIST OF ALL OPEN STANDARDS PROJECT (FROM IEEE Website 02/12/2005)
<http://standards.ieee.org/board/nes/C2-C136.html>

Only PARs submitted electronically and approved since the December 1998 Standards Board meeting are listed

PC57.12.00 (PE/TR) Standard General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers

PC57.12.01 (PE/TR) Standard General Requirements for Dry-Type Distribution and Power Transformers Including Those with Solid Cast and/or Resin Encapsulated Windings

PC57.12.10 (PE/TR) Standard Requirements for Liquid-Immersed Power Transformers

PC57.12.20 (PE/TR) Standard for Overhead Type Distribution Transformers, 500 kVA and Smaller: High Voltage, 34500 Volts and Below; Low Voltage, 7970/13800Y Volts and Below

PC57.12.28 (PE/TR) Standard for Pad Mounted Equipment - Enclosure Integrity

PC57.12.29 (PE/TR) Standard for Pad Mounted Equipment - Enclosure Integrity for Coastal Environments

PC57.12.36 (PE/TR) Standard Requirements for Liquid-Immersed Distribution Substation Transformers

PC57.12.37 (PE/TR) Standard for the Electronic Reporting of Distribution Transformer Test Data

PC57.12.40 (PE/TR) Requirements for Secondary Network Transformers, Subway and Vault Types (Liquid-Immersed)

PC57.12.44 (PE/TR) Standard Requirements for Secondary Network Protectors

PC57.12.60 (PE/TR) Standard Test Procedure for Thermal Evaluation of Insulation Systems for Dry Type Power and Distribution Transformers, Including Ventilated, Solid-Cast and Resin Encapsulated Transformers

PC57.12.80 (PE/TR) Standard Terminology for Power and Distribution Transformers

PC57.12.90 (PE/TR) Standard Test Code for Liquid-Immersed Distribution, Power, and Regulating Transformers

PC57.13 (PE/TR) Standard Requirements for Instrument Transformers

PC57.13.1 (PE/PSR) Guide for Field Testing of Relaying Current Transformers

PC57.13.2 (PE/TR) Conformance Test Procedure for Instrument Transformers

PC57.13.3 (PE/PSR) Guide for Grounding of Instrument Transformer Secondary Circuits and Cases

PC57.13.6 (PE/TR) Standard for High Accuracy Instrument Transformers

PC57.15 (PE/TR) Standard Requirements, Terminology, and Test Code for Step-Voltage Regulators

PC57.19.03-1996/Cor 1-20xx (PE/TR) Standard Requirements, Terminology, and Test Code for Bushings for DC Applications - Corrigendum 1

PC57.21 (PE/TR) Standard Requirements, Terminology, and Test Code for Shunt Reactors Rated Over 500 kVA

PC57.32 (PE/TR) Standard Requirements, Terminology and Test Procedures for Neutral Grounding Devices

PC57.93 (PE/TR) Guide for Installation of Liquid-Immersed Power Transformers

PC57.98 (PE/TR) Guide for Transformer Impulse Tests

PC57.100 (PE/TR) Standard Test Procedure for Thermal Evaluation of Insulation Systems for Liquid-Immersed Distribution and Power Transformers

PC57.104 (PE/TR) Guide for the Interpretation of Gases Generated in Oil-Immersed Transformers

PC57.106 (PE/TR) Guide for Acceptance and Maintenance of Insulating Oil in Equipment

PC57.110 (PE/TR) Recommended Practice for Establishing Liquid-Filled and Dry-Type Power and Distribution Transformer Capability When Supplying Nonsinusoidal Load Currents

PC57.119 (PE/TR) Recommended Practice for Performing Temperature Rise Tests on Oil Immersed Power Transformers at Loads Beyond Nameplate Rating

PC57.127 (PE/TR) Guide for the Detection and Location of Acoustic Emissions from Partial Discharges in Oil-Immersed Power Transformers and Reactors

PC57.129 (PE/TR) Standard for General Requirements and Test Code for Oil-Immersed HVDC Converter Transformers

PC57.130 (PE/TR) IEEE Trial-Use Guide for the Use of Dissolved Gas Analysis During Factory Temperature Rise Tests for the Evaluation of Oil-Immersed Transformers and Reactors

PC57.131 (PE/TR) Standard Requirements for Tap Changers

PC57.139 (PE/TR) Guide for Dissolved Gas Analysis in Transformer Load Tap Changers

PC57.140 (PE/TR) Evaluation and Reconditioning of Liquid Immersed Power Transformers

PC57.142 (PE/TR) A Guide To Describe The Occurrence And Mitigation Of Switching Transients Induced By Transformer-Breaker Interaction

PC57.143 (PE/TR) Guide for Application of Monitoring to Liquid-Immersed Transformers and Components

PC57.146 (PE/TR) Guide for Interpretation of Gasses Generated in Silicone-Immersed Transformers

PC57.147 (PE/TR) Guide for Acceptance and Maintenance of Natural Ester Fluids in Transformers

PC57.148 (PE/TR) Standard for Control Cabinets for Power Transformers

PC57.149 (PE/TR) Guide for the Application and Interpretation of Frequency Response Analysis for Oil Immersed Transformers

PC57.150 (PE/TR) Guide for the Transportation of Transformers and Reactors Rated 10,000 kVA or larger