

Annex K Power Transformers Subcommittee

October 26, 2016

Vancouver, BC Canada

Meeting Time: 1:30 p.m.

Chair: Bill Griesacker

Vice Chair: Kipp Yule

Secretary:

K.1 Meeting Attendance

The Power Transformers Subcommittee met on Wednesday, October 26, 2016, at 1:30 PM. The attendance recorded indicated that 74 out of 113 members of the subcommittee were in attendance; a quorum at the meeting was achieved. A total of 225 individuals attended the meeting; 20 guests requested membership.

K.2 Approval of previous meeting minutes, and meeting agenda

The Chair presented the Agenda, Attachment K.2, and it was approved.

The Chair requested a motion to approve the Spring 2016 Atlanta meeting minutes. The motion was made by Dan Sauer and seconded by Marcos Ferreria, and the minutes were subsequently approved by unanimous vote.

K.3 Chair's Remarks

Joe Watson is stepping down from chair position, Bill Griesacker will assume chair responsibilities after the Vancouver meeting, Kip Yule will be Vice Chair and the secretary position will be filled.

K.4 Working group reports

K.4.1 Revision of C57.12.10 IEEE Standard Requirements for Liquid-Immersed Power Transformers – Gary Hoffman

See details of meeting minutes in Attachment K.4.1. A quorum was achieved. A 30-day straw ballot was conducted following the Spring-2016 meeting; draft D2.0 was compiled and transmitted to the WG membership as a proposal to approve Draft D2.0 for IEEE Sponsor Ballot. The Chair discussed the decision to use the letter (email) ballot method to proceed “quickly” and desired to see if there was consensus to go to ballot and identify remaining issues. The Chair indicated that based on the results of this letter ballot it was his intent to request approval of the Power Transformers SC at the Wednesday SC meeting to go to sponsor ballot. There was discussion that the process was not following procedures including not allowing discussion, not addressing negatives adequately, and if a true consensus had been attained. A motion was made to re-open the draft to address the negatives, however this motion did not carry. Motion to send to IEEE for final mech. review and balloting was approved.

K.4.2 Revision of C57.93 IEEE Guide for Installation and Maintenance of Liquid-Immersed Power Transformers – Mike Lau

See details of meeting minutes in Attachment K.4.2. The WG voted to form a taskforce to study the commonality between C57.93 and C57.152, regarding testing transformers before

unloading and prior to placing on a pad. A straw ballot will be held regarding C57.93 draft version 1.4. A table of various electrical tests to consider performing while the transformer is under vacuum will be included in the document with a maximum test voltage of 100 VDC or 100 VAC.

K.4.3 Revision of C57.125 Guide for Failure Investigation, Documentation, Analysis and Reporting for Power Transformers and Shunt Reactors – W. Binder

No meeting was held.

K.4.4 TF to Compare C57.131-2012 Standard for Load Tap Changers and IEC 60214-1 ED 2.0 for consideration of recommending adoption of IEC standard (Also WG 60214-2 Tap-Changer Application Guide) - Craig Colopy

See details of meeting minutes in Attachments K.4.4.1. and K.4.4.2.

TF Comparison of IEC 60214-1 and IEEE C57.131: Chairman created a PAR for adopting IEC 60214-1 for revision of IEEE C57.131-2012. PAR is planned to be reviewed at the December or January 17 board meeting. A preview of the PAR by IEEE and IEC has brought into question the process of adopting an IEC standard which is not currently available. A working copy of 60214-1 from IEC has met some resistance. Axel Kraemer mentioned that with stability date of 2019 showing for the IEC 60214-1 document, work on a revision would likely begin after 60214-2 Tap-Changer Application guide is published, which would likely be in 2019. It is planned for a dual logo joint revision with IEEE.

WG TC Application Guide IEC 60214-2: A recommendation was made to change LTC to OLTC as most joint IEEE-IEC documents have done. IEC CD and IEEE Ballot are planned in Q3, 2017, with a CDV to follow likely before the end of 2017. Next meeting planned for Q1 2016.

K.4.5 C57.140 Guide for the Evaluation and Reconditioning of Liquid-Immersed Power Transformers – Paul Bowman

See details of meeting minutes in Attachment K.4.5. Draft 7 ballot results were reviewed and resolution of items discussed. The comment spreadsheet will be sent out (draft 7) for review and electronic ballot by the WG. A simple majority will be needed to recirculate Draft 7 to the Sponsor Ballot pool

K.4.6 C57.143 – Guide for Application of Monitoring Equipment to Liquid-Immersed Transformers and Equipment – Mike Spurlock

Mike Spurlock will be the new working group chair to start work on the next revision of the guide. The document was published in 2012 and the next revision is due in 2023. The work will be started somewhat early since this technology changes rapidly.

K.4.7 Revision of C57.148 Guide for Control Cabinets for Power Transformers

The PAR for revision of the control cabinet guide, C57.148, was approved on 6/30/2016 and is valid until the end of 2020. A motion was approved to conduct a straw ballot within the Working Group to solicit comments and recommend changes for all sections of the document. General questions will also be included with the Straw Ballot to find out how widely the standard is being used and how familiar Users (utilities, manufacturers, consultants, control cabinet suppliers, etc.) are with the Standard.

K.4.8 Revision of C57.150 Guide for the Transportation of Transformers and Reactors Rated 10,000 kVA or Larger – Greg Anderson

Will submit a PAR for revision. Will meet in New Orleans to start on revising guide.

K.4.9 Development of PC 57.153 Guide for Paralleling Transformers - Tom Jauch

No meeting was held.

K.4.10 Development of PC57.156 Guide for Transformer Tank Rupture Mitigation of Liquid-Immersed Power Transformers and Reactors - Peter Zhao

Working group did not meet.

K.4.11 Development of PC57.157 Guide for Conducting Functional Life Tests for De-Energized Tap Changer Contacts - Phil Hopkinson

Working group did not meet.

K.4.12 Development of Standard Requirements for Phase Shifting Transformers - IEEE/IEC 60076-57-12 - Raj Ahuja

No meeting. Work was completed in February of 2016. IEEE approved the document. The Draft can be published once IEC gives approval.

K.5 Old Business

The PTSC will sponsor a tutorial on LTC testing techniques since there is a perceived need for an LTC field testing guide. Craig Stiegemeier is leading and helping organize this effort. A meeting was held in Vancouver with interested parties to coordinate the panel speakers for the tutorial. Others are requested to participate that have a testing technology that they would like to introduce or discuss.

It was requested that those interested in working on a taskforce to investigate if a section on Volts per Hertz should be added to C57.116 give their name. Ramsis Girgis expressed interest in this work.

K.6 New Business

A taskforce was formed to provide a recommendation if a working should be formed to write a transformer condition assessment standard guide. Brian Sparling is leading the taskforce and plans to hold a taskforce meeting before the next PTSC meeting.

Joe Watson wants to form a task force to come up with a standard template for working group meeting minutes.

K.7 Adjournment

The meeting adjourned as scheduled.

K.8 Attachments –Working Group Meeting Minutes and Agenda

Attachment K.2 – S16 PTSC Agenda

Attachment K.4.1 – PC57.12.10 Standard Requirements

Attachment K.4.2 – PC57.93 Installation Guide

Attachment K.4.4.1 – TF IEC 60214-1 / IEEE C57.131 Tap Changer harmonization

Attachment K.4.4.2 – WG 60214-2 IEC Tap Changer Part 2 Application Guide

Attachment K.4.5 – PC57.140 Evaluation and Reconditioning Guide
Attachment K.4.6 – PC57.148 Control Cabinets

Unapproved Draft

Attachment K.2

AGENDA

IEEE Transformers Committee / Power Transformers Subcommittee

Wednesday, March 23, 2016, 1:30-2:45 PM

Sheraton Atlanta Hotel, Capital Ballroom, Atlanta GA, USA

Joe Watson – Chair, Bill Griesacker – Vice Chair, Kipp Yule - Secretary

1. Call to order
2. Introduction and distribution of attendance sheets
3. Determination of a quorum
4. Approval/correction of the spring 2015 minutes
5. Report from the Administrative Subcommittee meeting
6. New Business
7. Working Group and Task Force report

Project	Title	Chair
IEEE/IEC 60076-57-1202	Development of Standard Requirements for Phase Shifting Transformers (PAR to 12/31/2016) *	Raj Ahuja
C57.12.10	Revision of IEEE Standard Requirements for Liquid-Immersed Power Transformers (Next revision due 9/30/2020, PAR to 12/31/2019)	Gary Hoffman
C57.17	Revision of Requirements for Arc Furnace Transformers (Published in 2012, next revision due in 2022) *	Robert Ganser
C57.93	Revision of IEEE Guide for Installation and Maintenance of Liquid-Immersed Power Transformers (Published in 2007, next rev. due in 2018, PAR to 12/31/2016)	Mike Lau
PC57.116	Revision of Guide for Transformers Directly Connected to Generators (Published in 2014, next revision due in 2024) *	Gary Hoffman
PC57.125	Revision of Guide for Failure Investigation, Documentation, Analysis and Reporting for Power Transformers and Shunt Reactors (Published in 2015, next revision due in 2025) *	Wallace Binder
C57.131 IEC 60214-1 IEC 60214-2	IEEE Standard Requirements for Load Tap Changers – Joint IEEE/IEC revision	Craig Colopy
C57.135	IEEE Guide for the Application, Specification and Testing of Phase-Shifting Transformers (Published in 2011, next revision due in 2021) *	Jin Sim
PC57.140	Revision of Guide for Evaluation and Reconditioning of Liquid-Immersed Power Transformers (Published in 2006, next revision due in 2018) (PAR to 12/31/2017)	Paul Boman
C57.143	Guide for Application for Monitoring Equipment to Liquid-Immersed Transformers and Equipment (Published in 2012, next revision due in 2023) *	Donad Chu
C57.148	Standard for Control Cabinets for Power Transformers (Published in 2011, next revision due in 2021)	Joe Watson
C57.150	Guide for the Transportation of Large Power Transformers and Reactors (Published in 2012, next revision due in 2022) *	Greg Anderson
PC57.153	Development of Guide for Paralleling Transformers (Published in 2015, next revision due in 2025) *	Tom Jauch
PC57.156	Development of Guide for Transformer Tank Rupture Mitigation of Liquid-Immersed Power Transformers and Reactors (PAR extended to 12/17) *	Peter Zhao
PC57.157	Development of Guide for Conducting Functional Life Tests for De-Energized Tap Changer Contacts (Published in 2015, next revision due in 2025) *	Phil Hopkinson
IEEE 638	Revision of IEEE Standard for Qualification of Class 1E Transformers for Nuclear power Generating Stations (Published in 2013, next revision due in 2023) *	Craig Swinderman

* No meetings were scheduled during this time for these documents

8. Old Business
9. Collection of Attendance Sheets
10. Adjournment

Unapproved Draft

Attachment K.4.1

*PC57.12.10 - WG for the Revision of
IEEE Standard Requirements for Liquid-Immersed Power Transformers*

8:00 to 9:15 AM, October 25, 2016
Sheraton Vancouver Wall Centre Hotel, Vancouver, CA

Unapproved Meeting Minutes

WG Chair Gary Hoffman called the meeting to order at 8:02 a.m., Tuesday, October 25, 2016, with WG Vice-Chair Brian Penny and WG Secretary Scott Digby also present. Introductions were made and rosters circulated.

Total Attendance	137
Members in Attendance	40 (out of 56 members, quorum was achieved)
Guests in Attendance	97
Guests Requesting Membership	16 (9 meeting membership eligibility requirement of attendance at 2 consecutive meetings)

Guests Requesting Membership:

	Membership granted?
Vladimir Abril	No
William Boettger	Yes
Hugo Flores	Yes
Anthony Franchitti	Yes
Saurabh Ghosh	No
Josh Herz	Yes
Jill Holmes	Yes
Weijun Li	Yes

	Membership granted?
Terence Martin	No
Rashed Minhaz	No
Fabian Stacy	No
Roy Su	Yes
Olivier Uhlmann	No
Jason Varnell	Yes
Trenton Williams	Yes
Joshua Yun	No

Additional guests that were eligible for membership, having met the eligibility requirement of attendance at 2 consecutive meetings, but did not request membership: Donald Ayers, Jeremiah Bradshaw, Jean-Francois Collin, Michael Craven, Eric Davis, James Graham, Shamaun Hakim, Shawn Luo, Joe Nims, Jow Ortiz, David Ostrander, Ulf Radbrandt, Sergiy Razuvayev, Steve Schappell, Yukiyasu Shirasaka, Andre Shor, Andrew Steineman, Gregory Stem, Shankar Subramany, Christopher Sullivan, and Barnes Wilson.

The agenda was reviewed and a **motion** to approve was made by Eduardo Garcia and seconded by Ewald Schweiger, which was **approved by unanimous consent**.

The minutes to the Spring-2016 meeting of this WG had been circulated to the WG membership and guests prior to the meeting and a **motion** to approve was made by John K. John and seconded by Ryan Musgrove. The **motion passed by unanimous consent**.

The Chair made the requisite Call for Patents and there were none noted by those present.

During the Chair's remarks, the Chair expressed thanks to the working group and task forces for the activities since the Spring-2016 meeting in Atlanta and proceeded to discuss the activities that had been completed. A 30-day straw ballot had been executed immediately following the Spring-2016, resulting in approximately 300 comments which were in turn forwarded to the respective clause TF Chairs to resolve. At the conclusion of the resolution of the comments by the TF's, Draft D2.0 was compiled and transmitted to the WG membership as a proposal to approve Draft D2.0 for IEEE Sponsor Ballot. The WG membership was provided the time period of September 22nd thru October 22nd to review the draft and vote on the proposal. The Chair discussed the decision to use the letter (email) ballot method, citing the Policies and Procedures manual as stating for WG's to proceed "quickly" and desired to see if there was consensus to go to ballot, or in the process identify the remaining issues.

The results of the letter ballot are as follows:

Votes received	35 out of 56 members	62.5% (quorum achieved)
Approve	29	82.9% (2/3 majority, or super-majority, achieved)
Disapprove	6	17.1%

The Chair indicated that based on the results of this letter ballot it was his intent to request approval of the Power Transformers SC at the Wednesday SC meeting to go to sponsor ballot. The Chair encouraged attendees to become members of the ballot pool, emphasizing that they must be members of the IEEE Standards Association in order to do so. Clarification was also stated that

comments received during the balloting process must be responded to, with accepted comments going in verbatim into the document but rejected comments receiving an explanation.

Don Platts made a **Motion**, which was seconded by Sue McNelly, to re-open Draft D2.0 for discussion, thus nullifying the letter ballot to approve for IEEE sponsor ballot.

Don discussed reasons for this motion, stating as reasons failure to follow Policies and Procedures manual, failure to implement material documented in the minutes, terminology changes that had been made, and statements in the document that were changed to “or” statements, creating a type of “menu” not typical of a standard document. Upon request by the WG Chair for additional detail regarding procedural errors, Don stated that Task Forces that are formed are obligated to report back to the WG. The Chair indicated that this was accomplished by way of the letter ballot. Don countered that this process allowed for no discussion, again stating that the TF work needs to be approved by the WG. The Chair stated in opposition to Mr. Platts’ statement that the comment resolution and a revised draft was shared with the WG and Letter Ballot was approved.

Steve Antosz noted that 6 WG members had disapproved the proposal to approve the draft for sponsor ballot and asked what comments were made. The Chair said that should not matter and stated the concept that one person cannot hold up the process.

The motion was called to vote, with the following results:

Approve	15
Disapprove	15 + Chair → 16
Abstain	9

The motion did not carry.

Joe Watson asked whether the Mandatory Editorial Review had been completed. The Chair said not yet, as were waiting for the approval to submit for sponsor ballot before doing so.

Steve Antosz expressed concern with this process and that there seemed to be question among the WG as to whether consensus had truly been obtained. The Chair’s response was that the request for approval for Sponsor Ballot gave the WG Members the opportunity to see how the draft was revised and that the Sponsor ballot process that requires a much higher bar of 75% approval would vet this concern.

Under New Business, Ronnie Minhaz requested clarification concerning section A.1.2 (VFVV OLTC regulation) around the interpretation of the phrase that the HV system voltage is presumed to be relatively constant therefore the flux density being variable when the LTC is located in the HV. There was some clarifying discussion provided by David Geibel and Sanjay Patel, clarifying that the standard has to assume voltage is stable before considering the effect on the transformer, that the nameplate voltage values set the basis (thus when HV turns change the volts/turn and thus the flux density change), and that the nameplate values are no-load based values.

It was noted that the next WG meeting would be in the spring during the IEEE Transformers Committee meetings in New Orleans.

The meeting was adjourned at approximately 8:45 a.m.

Respectfully Submitted,

Scott Digby, WG Secretary

Attachment K.4.2

Working Group to Installation of Power Transformers C57.93
Monday, October 24, 2016
1:45 – 3:15 PM
Capital Central Ballroom
Sheraton Hotel, Vancouver, BC

Chairman Mike Lau
Vice Chairman Alwyn VanderWalt
Secretary Scott Reed

The meeting was called to order at 1:45 am by Chair Mike Lau.

There were 14 of 24 members present. There were 58 guests, 18 guests requesting membership and 53 visitors requesting to become a guest. A membership quorum was achieved. Guests attending the WG meeting for the first time who request membership or who have not attended 2 meetings in a row (including the present meeting, will be deferred until the next meeting attended.

Agenda

1. Attendance Roster Sign In / Quorum Check
2. Approval of the Agenda
3. Approval of the Spring 2016 minutes
4. Items of Discussion:
 - Maximum Oil Temperature during transformer dryout – Consideration on depletion of oxidation inhibitor content
 - Vacuum/Temperature limit for natural ester fluid during dryout?
 - C57 152 (Field Test Guide) reference this Guide for installation acceptance test. Do we need to add any acceptance test before unloading?
 - Removal or retention of informative safety items.
 - Any other outstanding comments for discussion
5. Straw Ballot amongst WG members on Version 1.4
6. Unfinished Business
- 7 New Business

Due to the time constraints, attendees did not introduce themselves.

The Fall 2016 Agenda was approved and the Spring 2016 Minutes were approved.

Chairman Lau posted the Patent Claim. No notifications or comments were received.

Chair's Remarks:

After discussion regarding the potential loss of inhibitor during the vacuum dryout of a new transformer or an in-service transformer, a motion was made by Larry Christodolou to automatically add inhibitor to 0.3% by weight after the completion of the vacuum filling and or hot oil circulation. Derek Baranowski seconded the motion and the motion carried.

There was discussion regarding testing a transformer before it is unloaded and prior to placing on a pad. Sue McNelly made a motion to establish a Task Force to study commonality between C57.93 and C57.152. Ewald Schweiger seconded the motion and the motion carried. Alwyn VanderWalt agreed to chair the study group.

The committee decided to remove all information related to safety notifications.

A straw ballot will be held regarding C57,.93 draft version 1.4.

Under Unfinished Business, Chuck Sweetser presented a table of various electrical tests to consider performing while the transformer is under vacuum. It was decided to include the table as part of the document with a maximum test voltage of 100VDC or 100VAC.

Under New Business, Ismail Guner is proposing a guide for best practices for asset management. The Scope of proposal will include inspection, diagnosis, and maintenance of transformers.

The meeting was adjourned at 3:03 pm.

Document #: TF Comparison of IEC 60214-1 and IEEE C57.131Document Title: Tap-ChangersChair: Craig A. Colopy Vice-Chair: Axel KraemerSecretary: Adam M. SewellCurrent Draft Being Worked On: NA Dated: NAMeeting Date: 25 October 2016 Time: 13:45 to 15:00

K.9 Attendance:	K.10 Members	22
	K.11 Guests	41
	K.12 Guests Requesting Membership	0
	Total	63

Meeting Minutes / Significant Issues / Comments:

1. Meeting was called to order at 1:45 pm, October 25, 2016.
2. Chairman created a PAR for adopting IEC 60214-1 for revision of IEEE C57.131-2012. PAR is planned to be reviewed at the Dec or Jan 17 board meeting. A preview of the PAR by IEEE and IEC has brought into question the process of adopting a IEC standard which is not available at this time. A working copy of 60214-1 from IEC has met some resistance.
 - a. Erin Spiewak (IEEE-SA) spoke about the reason why PAR was meeting resistance currently. Even though there is a process for adopting an IEEE standard into IEC, there IS NOT an approved process in place for IEEE to adopt an IEC standard. Discussions between IEEE and IEC about this process of adoption are scheduled to be discussed in January 2017 according to Erin.
 - b. This TF will not become a WG until the PAR is approved
3. Axel Kraemer mentioned that with stability date of 2019 showing for the IEC 60214-1 document, work on a revision would likely begin after 60214-2 Tap-Changer Application guide is published, which would likely be in 2019. It is planned for a dual logo joint revision with IEEE.
4. Meeting closed at 2:30 pm.

Submitted by: Craig A. ColopyDate: 10/25/16

Document #: WG TC Application Guide IEC 60214-2Document Title: Tap-ChangersChair: Craig A. Colopy Vice-Chair: Axel KraemerSecretary: Adam M. SewellCurrent Draft Being Worked On: NA Dated: NAMeeting Date: 25 October 2016 Time: 15:15 to 16:30

K.13 Attendance:	K.14 Members	18
	K.15 Guests	39
	K.16 Guests Requesting Membership	0
	Total	57

Meeting Minutes / Significant Issues / Comments:

5. Meeting was called to order at 3:15 pm, October 25, 2016.
6. Chairman provided the WG a background relating to the work being done to adopt the IEC standard 60214-1 as a dual logo document preserving main technical differences between C57.131 and 60214-1 in an Annex. Annex E of C57.131 is included within the latest draft of 60214-2, Tap Changer Application Guide.
7. The latest document draft 6WD of 60214-2 was presented to the WG by Axel Kramer. The draft showed highlighted text which was reviewed at the last meeting in Dresden, Germany and showed red text for any changes to the draft done in Dresden, Germany. Some comments were made by the WG:
 - a. Page 8-Introduction – add ‘tap-changer’ in front of manufacturer – Axel Kraemer
 - b. Section 11 – Storage – Axel Kraemer to work on changing title
 - c. Paul Jarman requested to see information on manual operation of OLTC’s. Section 13.2.1 of the draft was displayed showing information about manual operation of OLTC’s.
 - d. Paul Jarman made a comment that OLTC instead of LTC should be adopted. The chairman commented use of OLTC has been preferred for implementation in majority of joint IEC/IEEE documents where applicable.
8. IEC CD and IEEE Ballot are planned in Q3, 2017, with a CDV to follow likely before the end of 2017.
9. Future Work Sessions:
 - a. Vancouver, BC Canada, Oct. 27, 2016, 1-5PM, IEEE Transformer Committee meeting
 - b. 1st Quarter 2017, – TBD
10. Meeting closed at 4:30 pm.

Submitted by: Craig A. ColopyDate: 10/25/16

Unapproved Meeting Minutes from Guide for the Evaluation and Reconditioning of Liquid Immersed Power Transformers PC57.140

Meeting was held in Vancouver, BC, Canada, from 3:45-6:00pm October 24, 2016
Chairman: Paul Boman
Vice Chairman: Brian Sparling

There were 21 of 64 members present. There were 52 guests present. A membership quorum was not achieved. The WG does not plan to meet at the Spring 2017 Transformers Committee Meeting in New Orleans, Louisiana.

A motion to approve the Fall 2016 Vancouver Agenda was made by Eric Davis and seconded by Roger Verdolin. However, since there was not a quorum, no vote was recorded. There were no objections or additions to the agenda.

Patent disclosure announcement: The Chair asked if there were any individuals that were aware of any patent claims might be Essential Patent Claims. The following statement was read during the meeting:

If any individual believes that Patent Claims might be Essential Patent Claims, that fact should be made known to the entire working group and duly recorded in the minutes of the working group meeting.

There were no patents claims identified. Details on patent information can be found at:

<https://development.standards.ieee.org/myproject/Public/mytools/mob/slideset.pdf>

Introduction of members and guests were made.

Minutes from previous meetings were provided to the Working Group in advance of the meeting. There were no corrections identified. Since there was no quorum, no motion to approve the Spring 2016 Minutes was made during the Meeting.

The Chairman provided a summary of the Draft 7 ballot.

BALLOT OPEN DATE: 01-Aug-2016

BALLOT CLOSE DATE: 31-Aug-2016

TYPE: Revision

DRAFT #: 6

COMMENTS: 246

MUST BE SATISFIED COMMENTS: 84

RESPONSE RATE

This ballot has met the 75% returned ballot requirement.

132 eligible people in this ballot group.

101 affirmative votes

10 total negative votes with comments

10 negative votes with new comments

1 negative votes without comments

3 abstention votes: (Lack of expertise: 1, Lack of time: 1, Other: 1)

RESPONSE RATE

This ballot has met the 75% returned ballot requirement.

132 eligible people in this ballot group.

101 affirmative votes

10 total negative votes with comments

10 negative votes with new comments

1 negative votes without comments

3 abstention votes: (Lack of expertise: 1, Lack of time: 1, Other: 1)

115 votes received = 87% returned

2% abstention

APPROVAL RATE

The 75% affirmation requirement is being met.

101 affirmative votes

10 negative votes with comments

111 votes = 90% affirmative

Most of the comments were editorial in nature.

Ballot Comment from Don Platts: Technical – Section 5.1.1 - Grammar will be corrected.

Ballot Comment from Mario Locarno: Technical – CIGRE picture in Section 5.5.1.

Ballot Comment from Nancy Frost: Editorial – Rewrite Section 5.5.1.

Ballot Comment from George Frimpong: Technical – Copy write issue in Section 5.4.2.

Ballot Comment from Various: Technical – Table 1. Mario Locarno indicated that there is nothing in the table for exciting current or FRA.

Ballot Comment from Rabiz Foda: Technical –Section 5.10.1. – Recommended tests to identify internally generated noise to be considered for inclusion. The Chair asked if anyone was familiar with the proposed inclusion of special tests for identification of internally generated noise. No one indicated any familiarity with the testing that would be done. The Chair will talk to the commenter to request additional information on whether this has been done previously.

Ballot Comment from Alexander Kraetge: Editorial –Section 5.7. – No comments or discussion.

Ballot Comment from Alexander Kraetge: Editorial –Section 5.7. – No comments or discussion.

Ballot Comment from Gary Hoffman: Editorial – Table 4 – The RIP and OIP in parentheses need to be defined. This will be corrected.

The comment spreadsheet will be sent out (draft 7) for review and electronic ballot by the WG. A simple majority will be needed to recirculate Draft 7 to the Sponsor Ballot pool.

Meeting was adjourned at 5:14PM.

Respectfully Submitted,
Paul Boman, Chairman

Revision of C57.148 Guide for Control Cabinets for Power Transformers

Joe Watson: Chair, Weijun Li: Vice-Chair, Jean-Francois Collin: Secretary

The working group met at 11:00 AM on October 24th, 2016 in Junior Ballroom C-D at the Sheraton Wall Centre Hotel in Vancouver, BC, Canada. 58 attendees were recorded. It was the first official Working Group meeting for this project. All meeting attendees were eligible to join the WG and since all members were in attendance, a quorum was reached. The complete attendance record is available in the AM System. 23 guests were granted membership.

The meeting started with the approval of Atlanta Spring 2016 Task Force meeting minutes. There were no recommended changes and the minutes were approved. The revised meeting agenda with added Patent claim section was approved. The Patent question was asked and no essential patents were claimed.

The Chair noted that the PAR was approved on 6/30/2016 and is valid until the end of 2020.

The occurrence of numerous statements in the Standard saying “unless otherwise specified” was discussed with the suggestion that this could be added as a general statement instead of duplicating it all over the standard document.

During the previous meeting of the Task Force to determine whether a revision was required, some Task Force members volunteered to review sections of the standard. The volunteers did not present reports, but Ryan Musgrove raised the question of whether the Standard was being widely used, and specifically how many utilities or manufacturers are using the current standard or are aware of the Standard. The group discussed polling Manufacturers and Users with these questions, but Gary Hoffman made a recommendation to do a straw ballot within the Working Group to solicit comments and recommend changes for all sections of the document. The motion was made by Gary Hoffmann and seconded by Rob Ghosh and approved unanimously. General questions will be also included with the Straw Ballot to find out how widely the standard is being used and how familiar Users (utilities, manufacturers, consultants, control cabinet suppliers, etc.) are with the Standard.

The Chair stated that the Standard was not presented to the Committee with a Tutorial, which is the current practice now, and that this would have introduced the Standard to more Users. In light of this, the group should present a tutorial for this revision after it is successfully balloted.

The Chair commented that C57.148 doesn't have an objective to propose unnecessary requirements on the manufacturers. And reminded the group that each section of the document is open for discussion, and that comments need to be specific and not just general statements such as “this section needs to be reworded”, etc. This WG is open to other suggestions such as what else should be or shouldn't be included in the standard.

The Chair proposed a schedule for the straw ballot: 30 days to review. Officials will review the straw ballot results and categorize all comments. Results will be discussed at the next meeting and Task Forces will be formed to address the Straw Ballot comments.

A working copy of the Standard has been requested from IEEE and will be posted on the Power Transformers Subcommittee web page on the Transformers Committee site before the straw ballot can start.

The group will meet again in New Orleans, Louisiana in April 2017.

The meeting was adjourned at 12:00 PM.