

10.2 Distribution Transformer Subcommittee Report

J. Edward Smith - Chairman
(edsmith@h-jenterprises.com)

Meeting Time:

Attendance: 32 Total

15 Members

17 Guests

2 Guest Requesting Memberships

10.2.1 Chair's Remarks & Announcements:

Review of Administrative Committee meeting highlights

- Future Meetings
- New Members
- Transformer Standards Activity

10.2.2 Working Group Reports

10.2.2.1 C57.12.20 Overhead Distribution Transformers

(Alan Wilks & Tommy Cooper Co Chairs

(awilks@ermco-eci.com & Tommy.cooper@faypwc.com)

PAR Status: Current

PAR Expiration Date: End of 2005

Current Standard Date: 1997

Current Draft Being Worked On: 9 Dated: October, 2003

Meeting Time: 09:30am, Monday, October 06, 2003

Attendance: 29 Total

18 Members

11 Guests

02 Requests for membership

Issues, Remarks & Announcements:

- Introductions were made and the minutes of the last meeting in Raleigh were approved. Glen Andersen's resignation was noted. He will be greatly missed. The metrification issue was briefly discussed with the outcome being dual dimensioning with metric as standard and US customary in parenthesis. Draft 9 was reviewed with most of the changes related to moving the US customary units from the footnotes to behind the metric values but put in parenthesis. The rewording of cover bonding discussed in Raleigh was also added. Several minor corrections were made to improve the dual dimensioning. A line for 125 KV BIL was inadvertently left off Table 6, which will be reinstated. The current draft 9 with the corrections agreed upon in this meeting will be submitted for a T.C. Ballot. A suggestion was made to get the dielectric test paragraph related to single bushings with a high voltage terminal permanently grounded included in 12.00 and 12.90. This would eliminate the need to take exception to 12.00 & 12.90 related to no applied voltage test but higher than normal induced voltage test. The chair will write a letter to the chairman of the dielectric test sub-committee.

- There was no old business other than Draft 9. Angle and Tilt will be discussed in the S.C. meeting.
- For new business, Tim Olsen indicated there were no balloons for some item such as liquid level working, lifting lugs and pressure relief valve in Figures 7 through 14. We will address this in future meetings so as not to delay this draft.
- The meeting adjourned at 10:45AM

10.2.2.2 C57.12.23 Single Phase Submersible Distribution Transformers

Al Traut & Bikash Basu Co Chairs

(alant@kuhlman.com & basub@sce.com)

PAR Status: Approved 3/18/1999 (For Standard Revision)

PAR Expiration Date: N/A

Current Standard Date: 1992, Reaffirmed 1999

Current Draft Being Worked On: #IV

Meeting Time: ***DID NOT MEET***

10.2.2.3 C57.12.25 Single-Phase Padmounted Distribution Transformers

Ali Ghafourian & Ignacio Ares Co Chairs

(aghafourian@ermco-eci.com & Ignacio_ares@fpl.com)

PAR Status: Approved 12/08/1998 (For combining Standards C57.12.25 & C57.12.21)

PAR expiration Date: End of 2002

Current Standard Date: 1990

Current Draft Being Balloted: #VIII

Current Draft Being Worked on: #3, Dated: March 2003

Meeting Time: ***DID NOT MEET***

C57.12.28, C57.12.29, C57.12.31 & C57.12.32 Standards previously under the NEMA Secretariat are reviewed and revised NOW under the IEEE Transformer Committee)

10.2.2.4 C57.12.28 Pad-Mounted Equipment Enclosure Integrity

Bob Olen & Dan Mulkey Co Chairs

(bolen@cooperpower.com & dhm3@pge.com)

PAR Status: Approved

PAR expiration Date: May 09, 2007

Current Standard Date: ANSI/NEMA 1999

Current Draft Being Worked on: D1.6a Dated: 09-09-03

Meeting Time: October 7, 2003 Time: 8:00 AM

Attendance: 40 Total

18 Members

19 Guests

3 Guest Requesting Memberships

Issues, Remarks & Announcements:

- Section 4.1.8 - Mike Cuhlane to work up wording using shackle size for conformance test
- Section 4.1.9 – No test method has been found for “fire resistant”
- Fig. 15 – Mike Culhane to provide drawing of assembled tool to replace the picture
- Mulkey and Culhane to meet on the number of digits in metric conversion spreadsheet
- Mulkey to move US customary units back into text per recent agreement on dual dimensioning
- Goal is to go to ballot following the San Diego meeting

10.2.2.5 C57.12.29 Pad-Mounted Equipment Enclosure Integrity for Coastal Environments

Bob Olen & Dan Mulkey Co Chairs

(bolen@cooperpower.com & dhm3@pge.com)

PAR Status: Approved by NES Com May 23, 2002

PAR expiration Date: May 09, 2007

Current Standard Date: ANSI/NEMA 1999

Current Draft Being Worked on: #1.1 Dated: September 16, 2003

Meeting Time: October 07, 2003 Time: 8:00 AM

Attendance: 40 Total

18 Members

19 Guests

3 Guest Requesting Membership

Issues, Remarks & Announcements:

- changes in 028 standard will be brought into 029 where applicable
- dual dimensioning to be done per recent agreement
- section 5.2.3 – Mulkey to work up wording for metal vs non-metal testing
- section 5.3.1 – accepted change of “1” between “exterior/interior”

10.2.2.6 C57.12.31 Pole Mounted Equipment Enclosure Integrity

Bob Olen & Dan Mulkey Co Chairs

(bolen@cooperpower.com & dhm3@pge.com)

PAR Status: Approved by NESCOM December 06, 2001

PAR expiration Date: December 2006

Current Standard Date: ANSI/NEMA 1996

Current Draft Being Worked on: Dated :

Meeting Times: ***DID NOT MEET***

10.2.2.7 C57.12.32 Submersible Equipment Enclosure Integrity

Bob Olen & Dan Mulkey Co Chairs

(bolen@cooperpower.com & dhm3@pge.com)

PAR Status: Approved by NESCOM December 2001

PAR expiration Date: December 2006

Current Standard Date: ANSI/NEMA 1994

Current Draft Being Worked on: Dated :

Meeting Times: ***DID NOT MEET***

10.2.2.8 C57.12.33 Guide For Distribution Transformer Loss Evaluation

Don Duckett & Tom Pekarek Co Chairs

(don.duckett@fpc.com & tipekarek@firstenergycorp.com)

PAR Status: PAR extension renewed for two years

PAR expiration Date: December 2004

Current Standard Date: October 2001

Current Draft Being Worked On: #9 Dated April 2003

Meeting Date: ***DID NOT MEET***

10.2.2.9 C57.12.34 Three-Phase Padmounted Distribution Transformers

Ron Stahara & Steve Shull Co Chairs

(rjstahara@msn.com & sshull@empiredistrict.com)

PAR Status: Approved 9/21/1995 (For Standard Development)

PAR expiration Date: December 2004

Current Standard Date: New Standard

This NEW Standard is a combination of the following two Standards

C57.12.22 1989 (Three-Phase Padmounted Distribution Transformers with H.V. Bushings)

(Copyright ANSI)

C57.12.26 1992 (Three-Phase Padmounted Distribution Transformers with Separable Connectors) (Copyright ANSI)

Current Draft Being Worked On: 10 Dated :

Meeting Date: ***DID NOT MEET***

10.2.2.10 C57.12.35 Bar Coding For Distribution Transformers

Lee Matthews & Giuseppe Termine Co Chairs

(lmattews@howard-ind.com & Giueseppe.termine@peco-energy.com)

PAR Status: Active for Reaffirmation

PAR expiration Date: The PAR expires December 2002(*see below)

Current Standard Date: 1996

Current Draft Being Worked On: NONE

Meeting Time: ***DID NOT MEET***

10.2.2.11 C57.12.36 Distribution Substation Transformers

John Rossetti & David Aho - Co Chairs

(jrossetti@mlgw.org & daho@cooperpower.com)

PAR Status: PAR Approved June 2002

PAR expiration Date: October 2005

Current Standard Date: NEW Standard Under Development

Current Draft Being Worked On: #1 Dated September 04, 2003

Meeting Date: October 07, 2003 Time: 11:00AM

Attendance: 38 Total

17 Members

17 Guests

04 Guest Requesting Membership

Issues, Remarks & Announcements:

- Minutes from the Raleigh meeting were reviewed and approved as written
- Major changes have been made to this draft since the last meeting. The entire focus of our meeting was to address comments received on the latest draft. Some of the issues addressed are as follows:
 - KVA ratings will be added and ranges expanded in the appropriate tables.
 - After a good debate, it was decided to keep tables as written addressing voltage ration limits. Clarifications will be made to identify phase voltages and to include single-phase voltage applications.
 - The impedance voltage table will be changed to eliminate KVA and BIL mis-interpretations. Also the 480V threshold will be changed to 600V.
 - Due to safety concerns, it was decided to require a “manual” pressure relief on all KVA sizes, not just ratings 2500 KVA and below.
 - Under Oil Fusing Section will be eliminated as it is not addressed in other Distribution Transformer Standards
 - Equipment Grounding Section will be reviewed by Stan Kostyal to try and clarify requirements.
 - The section on “storage” will be replaced with a reference to C57.93. (Installation Guide)
 - It was agreed that bushing terminal requirements and termination supports should be expanded with greater detail. For now this will remain in the appendix.
 - A number of other editorial changes were discussed.
- With no further business, the meeting adjourned at 12:15PM.

10.2.2.12 C57.15-200XStep-Voltage Regulators

(Craig Colopy & Gael Kennedy Co Chairs

(ccolopy@cooperpower.com & grkennedy@nppd.com)

PAR Status: Active

PAR Expiration Date: April 2004

Current Standard Date: C57.15 – 1999 – Published April 2000

Current Draft Being Worked On: Draft 2.1 Dated: March 2003

Meeting Date: Tuesday, October 07, 2003 Time: 15:15

Attendance: 31 Total

Members: 15

Guests: 16

Guest Requesting Membership: 3

Issues, Remarks & Announcements:

- Introduction by all present
- Minutes of the last meeting approved (moved by Lee Matthews; 2nd by Dave)
- Began the process of reviewing the comments on the draft 2.0 document
- Jim Chairman T – 14 is here to look at the options of being a dual IEC/IEEE standard
- Ed Smith gave a presentation on the dual dimensioning proposals and their effect on all the Distribution Standards. These will be in Dual Dimensioning. Metric first (US Customary in Parenthesis). A discussion followed.
 - Take the issue of all Distribution Standards with dual dimensioning to Committee for clarification. The task was assigned to Ed Smith.
 - The group reviewed most of the comments received through 5.7.3 with much insight. (see attached listing)
 - Other items included:
 - _Add definition of Voltage supply Ratio
 - _3.21 duplicate definition on ONAN
 - _3.21 last sentence duplicate with 3.17
 - _3.28 Discussion on the effects of the tap position on the losses, change may be too much detail for a definition
 - _3.45 C57.95-1984 has been withdrawn but it was the only standard that was directly written for loading on regulators
 - _3.45 look at the -5C versus the -20C of many of the other standards. The -5C comes directly from the C57.12..20-1997. Action: Craig will follow up with Al Wilks on the debate -5 or -20C numbers.
 - _3.48 first sentence “as shown as”
 - _3.49 “or of” should “or of”
 - _5.4 keep 886 amps regulator line in table
 - _Add notation on Ambient Temperature to the No-load Losses 5.7.3 paragraph?
 - _Need to provide more explanation on why the temperature measurements and the reactor loss (mainly I²R losses) are in conflict. Specifically in relation to 5.7.3.
- For the next meeting the following will be attempted:
Finish these comments, produce a Draft 3, and try to ballot.
- Motion to adjourn made by Ron Starhara and 2nd by Ron Kirker at 16:33.

10.2.2.13 C57.12.37 Electronic Reporting of Test Data (formerly P1388)

Richard Hollingsworth & Thomas Callsen Co Chairs

(rhollin@howard-ind.com & Thomas.Callsen@ExelonCorp.com)

PAR Status: Submitted for editorial review and balloting

PAR Expiration Date: December 2005

Current Standard Date: Published under IEEE Std. 1388-2000

Current Draft Being Worked On: D11

Meeting Date: October 06, 2003 Time: 08:00AM

Attendance: 22 Total

Members: 11

Guests: 11

Guest Requesting Membership: 0

Issues, Remarks & Announcements:

- After the introduction of those present, we opened with a review of the par status. There has been a problem uploading the document through the web page. It has been attempted 3 times. The PDF document was sent to IEEE by way of an e-mail. The document was too large. Tom Prevost will now be getting involved.
- It was suggested that we add ANSI C57.12.23-2003 to this document. We also discussed how to get more users to take advantage of this standard format. There are approximately 25-30 utilities using this format. Their feedback is that this data reporting system works well. The suggestion was made to send out a copy of this format with their present format.
- We request one (1) time slot for the San Diego meetings in March.
- Meeting adjourned at 09:15AM.

10.2.2.13 C57.144 Guide to Metric Conversion of Transformer Standards

Dudley Galloway & Tim Olson Co Chairs

(gallowaytt@aol.com & tolson@hydro.mb.ca)

PAR Status: Active

PAR Expiration Date: April 2006

Current Standard Date: New Document

Current Draft Being Worked On: D3 Dated: March 2003

Meeting Date: ***DID NOT MEET***

10.2.3 Subcommittee Old Business:

None reported

10.2.4 Subcommittee New Business:

None reported

