

IEEE/PES Transformers Committee Working Group on Requirements
For Three-Phase Submersible Transformers (C57.12.24)

Meeting Minutes

Omni William Penn Hotel; Pittsburgh, PA
Tuesday, March 27, 2018

Conference Center A Room

Members present

Giuseppe Termini – (Chairman) PECO (Exelon)
Israel Barrientos – Prolec GE
Piotr Blaszczyk, The Specialty Switch Co.
David Blew – PSE&G
Paul Chisholm - IFD Corp
Rhett Chrysler, ERMCO
Jermaine Clonts – Power Partners
Douglas Craig – Richards Mfg
Anil Dhawan - ComEd
Will Elliott – GE
Carlos Gaytan – Prolec GE
Said Hachichi – Hydro Quebec
Mike Hardin – H-J Enterprises
Bob Kinner, FirstPower Group
Brian Klaponski - CARTE International Inc.
Alejandro Macias - CenterPoint Energy
Kent Miller T&R Electric
Dan Mulkey – Mulkey Engineering Inc.
George Payerle – Carte International Inc.
Pedro Salgado – Electronic Technology Inc.
Igor Simonov - Toronto Hydro
Robert “Bud” Stinson – GE
Mike Thibault – PG&E
Alan Traut - Consultant
Jeremy Van Horn – IFD
John Vartanian – National Grid
Bill Wimmer – Dominion

Guests present

Jerry Allen - Metglas
*Jason Attard – Con Ed
Mladeh Banovic – Transformer Magazine
Daniel Berrler – ZTZ Services
Kevin Biggie - Weidmann
Alan Boege – Orto de Mexico
*Eric Bradford – GE
*Alexander Ebbert – ZTZ Services
*Thomas Dauzat – GE
James Dorsten – Alabama Power
Lee Doyle - Vaisala
Hakim Dulac - Qualitrol
Jean-Francois Gagnon – Siemens
Leonardo Galhardo - DuPont
Jorge Gonzales – Orto de Mexico
*Ali Ghafourian – H-J Enterprises
Ken Hampton – BGE
Jack Harley – FirstPower Group LLC
John Herron – Raytech USA
Patrick Ho – Powertech Labs Inc.
*Prince Jarrod - ERMCO
Brad Kittrell – Con Ed
*Alex Lizardo – Cargill

Jinesh Malde – M&I Materials
Brian McBride -- Cargill
Justin Minikel – Eaton
*Tyler Morgan – Duke Energy
Martin Munoz – Orto de Mexico
Shankar Nambi - Betchel
*James Ratty – Electronic Technologies. Inc.
Juan Ramirez -- CELECO
Tony Reiss –Custom Materials
Dennis Scoby – PG Access
Jeremy Sewell – Quality Switch
Russ Sewell – Quality Switch
*Jaber Shalabi – Vantran
Paul Shaffer – Gulf Power
Jane Shin – Con Ed
Jim Spaulding – City of Fort Collins Utilities
*Babanna Suresh – Southwest Electric Co.
Eric Theisen - Metglas
Reinaldo Valentin – Duke Energy
Shelby Walters – Howard Industries
*Lee Welch – Georgia Power
* = requests membership

The meeting was called to order at 1:45 pm in Conference Level Room A at the Omni William Penn Hotel in Pittsburgh, PA on Tuesday, March 27, 2018. The chair presented an agenda. Kent Miller moved to accept the agenda and Al Traut seconded. The motion passed unanimously.

Introductions were made. The Chair stated that the membership stands at 33. There were 27 members present at this meeting so there was a quorum. There were 44 guests in attendance. 12 guests requested membership. George Payerle acted as recording secretary. The chair stated that adjustments to the membership will be made based on attendance.

The Chair asked if there were any patent claims that needed to be mentioned. There were none. The Chair presented the meeting minutes of the previous meeting in Louisville, KY. Brian Klaponski moved to accept the minutes as presented. Kent Miller seconded. The motion passed unanimously.

The Chair stated that there was an addition to the agenda to include a presentation by Bob Kinner on corrosion resistance.

The latest revision of C57.12.24 was published in 2016. At this time, the WG is acting as a task force and conducting a continuous improvement discussion in preparation for requesting a PAR. The purpose of the task force is to identify topics and changes for the next revision.

Bob Kinner presented information on corrosion resistance and cathodic protection. The presentation was followed by a group discussion. The Chair thanked Bob Kinner for his presentation. He also thanked Brian Klaponski who arranged to have Bob and Patrick Ho do presentations at both C57.12.24 and C57.12.40 WG meetings. Bob's presentation will be sent to the WG attendees.

The action items from the previous meeting in Louisville were reviewed and discussed. The Chair stated that Paul Chisolm reviewed the comments that were received from the last balloting process and there are no issues that needed to be considered in the next standard revision. Jeremy Van Horn reviewed Table 6 of the standard regarding the minimum material thickness of the tank and suggested that the Metric to English conversion values should be reevaluated. The Chair suggested Jeremy to review the conversion values against the requirements of IEEE standard C57.144, Guide for Metric Conversion of Transformer Standards and report the results at the next WG meeting. Israel Barrientos agreed to work with Jeremy on this effort.

Also, at the last WG meeting in Louisville, a suggestion was made to create a material compatibility table between the transformer tank and the hardware and components that are either attached or welded to the tank; e.g.: parking stands, drain valves, PRVs, etc. Tom Dauzat and Babanna Suresh worked on such compatibility table which was presented for discussion. Tom stated that GE and Florida Power & Light did a tremendous amount of research and testing on material compatibility. The stainless grades that seem to be used the most are 304L, 316L, and 409. However, there are some limitations on the use 409 steel due to the availability in sheet sizes used for the construction of larger transformer units. Mike Hardin stated that he has worked with a lot of 409 steel with good results and said that the key in using 409 steel is to properly apply the paint coating. Dan Mulkey also reported similar good results using 409 steel at PG&E.

Alex Macias made a motion to continue to work on and expand the material compatibility table to perhaps be incorporated in the next revision of the standard. Said Hachichi seconded, and the motion was approved unanimously. The Chair stated that the work on the material compatibility table may also apply to the C57.12.23 and C57.12.40 standards. Tom Dauzau agreed to lead the effort to work on and expand the table to be reviewed at the next meeting. The Chair suggested that other individuals from both utilities and manufacturers should assist Tom. The following individuals agreed to assist: Babanna Suresh, Mike Thibault, Anil Dhawan, John Vartanian, Will Elliott, Jim Spaulding and Brian Klaponski.

Tom Dauzat suggested that the utilities volunteers should forward him information related to hardware and components that are either attached or welded to the transformer tank via email: Thomas.dauzat@ge.com. He also suggested to send pictures of the actual components that are attached to the tank.

The meeting was adjourned at 3:00 PM. The next meeting will be in Jacksonville, FL on October 16, 2018.

Respectfully Submitted by: Giuseppe Termini, Chairman C57.12.24 Working Group