

C57.143 – IEEE Transformer Monitoring Working Group
Monday, March, 25, 2019
Anaheim, California, USA
Minutes of WG Meeting

The meeting was called to order at 3:15PM AM by Chair Mike Spurlock.

There were 53 of 87 members present ~~and~~. ~~There were~~ 63 guests for a total of 116 attendees. ~~Eight, and 8~~ guests requested membership. A membership quorum was achieved.

Agenda

1. Welcome & Introduction
2. Call for Patent Disclosure
3. Roster Circulation
4. Member Roll Call & Quorum Check
5. Chair Remarks
6. Recognition and thanks to volunteers
7. Approval of the Spring 2018 Meeting Minutes (Pittsburgh, PA)
8. Approval of the Fall 2018 Meeting Minutes (Jacksonville, FL)
9. Working Group Activities
 - a. Chapter 5
 - b. Chapter 6
10. New Business
11. Adjournment

Introductions of the Chair, Vice Chair, and Secretary were made. Attendees were asked to introduce themselves and indicate their affiliations when making comments or asking questions.

Chair Mike Spurlock introduced Poorvi Patel as the new committee vice chair and thanked Brian Sparling for this hard work and contribution to this working group.

Mike Spurlock also reminded the group that the PAR was approved in 2017 and expires December 31, 2021. That means we have ~~5-3~~ more meetings left to get this guide ready for balloting ~~infer~~ December of ~~2021~~2020. We will need a year for balloting and commenting and this means the time is getting closer.

Mike Spurlock also recognized the numerous volunteers for all the work they have put into the revision and additions.

A call for disclosure of any essential patent or patent applications claims was made. There were one patent claims identified.

A motion to approve the Spring 2018 Minutes was made by Joe Watson and seconded by Bill Whitehead. There were no objections or additions to the Minutes. There was no opposition to approval of the minutes.

A motion to approve the Fall 2018 Minutes was made by Joe Watson and seconded by Bill Whitehead. There were no objections or additions to the Minutes. There was no opposition to approval of the minutes.

An update on the working group activities around Chapter 5 work.

1. Bill Whitehead on the DGA, moisture, bushings, and GIC sections Bill is asking individuals for more support. The DGA portion is approximately 60% complete needing support in the fuel cell section for a technical and diagram. Volunteers are needed around solid state H2 sensor. The removal of the O2 sensor section was also discussed. Bill is also looking for installation and maintenance volunteers specifically around mounting, new/retrofit situations – Joe Watson offered to volunteer. Moisture looking at the .167 as terms to reference. Bushings need another last review. GIC is 60% complete and referencing the .163 guide instead of adding words to this guide. The question was asked about installation specifics for GIC. Luiz Cheim suggested including the sensors. Mike Spurlock volunteered to assist with the verbiage for the parameters to measure and type of sensors for GIC. AEP correlates GIC with transformer temperatures inside transformer. The use of a GEO-map instead of monitoring and use of calculations was also brought before the group. Luiz Cheim can assist this this. The NERC 007 standard was also brought up in this conversation. It was also noted that this standard assumes the transformer is young and in good working condition without considering the actual condition of the transformer.
2. Poorvi Patel's update was on sections 5.1, 5.2, 5.3. They have had a couple of tele-conferences and almost complete with a need for volunteers to help. Section 5.1 (Winding temps) – need information and help with operating conditions, installation of sensor and maintenance requirements. Please reach out to Poorvi Patel to assist with this and it could be just a review of the existing wording from the old guide and simple refreshing only. Section 5.2 is in good shape. The installation section does it need to be here? What is the difference in the installation at the factory and the field? Section 5.3 is in good shape. Luiz Cheim and Poorvi Patel are reviewing it and this section does not need volunteers.
3. Emilo Morales-Cruz's update section 5.4 (LTC) reviewed parameters on whole standard group them into sections. There is a need for volunteers

around the motor drive control and several sections need to be reviewed to determine if needed. The .139 LTC gas guide was also brought up. The question of what is the difference between monitoring DGA online and does it need to be included? Since there are numerous vendors who have this technology it was suggested that this be added to the DGA section. Bill Whitehead noted that this should be as a reference to the values that can be monitored. This discussion was held between Luiz Cheim, Poorvi Patel, and Bill Whitehead and Poorvi Patel will review the LTC guide referenced earlier and give feedback on what to keep or take out of the LTC and DGA sections. Section 5.5 – transformer tank needs to be formatted. The PRD section is in progress with all areas assigned and formatting of words is mostly what is lacking.

Also as a reminder, please make sure if given words from a supplier that permission is given in writing to use the wording and/or diagrams. We should not use any supplier internal material. Refer to standards lunch around this topic.

Mike Spurlock also noted that Chapter 4 is also under review. There is a new chapter #6 around asset selection, infrastructure, data collection and gathering. Also Chapter 7 need to be reviewed to determine if areas need to be removed. The appendix is also under review with updates needed. There was also mentioning of another new chapter for global manufacturing requirements.

| The goal is to have [the-a draft of the](#) guide out for review by the Fall 2019 meeting in Columbus Ohio in October.
There was no new business brought before the group.

The meeting was adjourned at 4:27PM

Mike Spurlock
WG Chair

Poorvi Patel
WG Vice-Chair

Elizabeth Bray
WG Secretary