

MEETING MINUTES
IEEE / PES Transformers Committee Performance
Characteristics Subcommittee

**WG to Investigate the Interaction between Substation Transients and Transformers in
HV and EHV Applications and Revision of C57.142**

Virtual Meeting
Tuesday, October 20, 2020
2:30 PM – 3:35 PM Central Time Zone - USA

Chairman – Jim McBride
Vice Chair – Xose Lopez-Fernandez
Secretary – Tom Melle

- 1) Meeting called to order at 2:25 PM Central Time.
Welcome and Chair's Remarks
- 2) Attendance Poll was taken at 2:30 PM.
104 Attendees were present (66 Guests)
38 of 69 Members present (quorum was achieved)
- 3) IEEE Patent Policy Slides (no essential patent claims made)
- 4) Approval of Agenda without objection. Approval of Spring 2020 Meeting Minutes without objection (motion to approve by Phil Hopkinson / 2nd by Rogerio Verdolin).
- 5) Switchgear Liason Task Force Update – Dave Caverly, Jim McBride
The WG continues to receive excellent comments since Draft 6 from Switchgear experts via the Switchgear Liason TF. Draft 8 was created to address many of the ongoing comments. The SC task force met on October 6, 2020 and reviewed changes made in D8. Additional comments have been received after the October 6th meeting which lead to Draft 8B (now circulated). The presentation and the minutes from the SLTF meetings will be posted on the WG website.
- 6) Status of present work (D8B) and comments – Jim McBride

It was noted the IEEE Transactions Paper developed by members of the C57.142 WG has been published and is now available on the IEEE website.

Most of the revision to the Guide is completed. However, the WG plans to file for a PAR extension, in the event the work is not completed by the end of 2021.

Draft 8B includes and address several additional comments from the Switchgear Committee. It is posted on the Transformers Committee website.

Poll Questions:

Poll Question #1 (Changes to Section 6.4 Interruption with repetitive re-ignition)

The chair reviewed comments by Dr. Edgar Dullni (Switchgear Committee). Amplification of internal transformer resonance was discussed, along with series/parallel considerations and impedances within the circuit. A motion was made by Phil Hopkinson to continue to study the data and review ABB Bland test protocol data (second by Mike Spurlock). The motion carried with 37/38 member votes. These topics will remain under discussion and other new comments will be reviewed at the next meeting.

Poll Question #2 (Delete Clause 6.6 Transformer internal voltage response)

The Chair asked if Section 6.6 remains necessary, after the addition of 6.5 and modification of other clauses. Discussion ensued whether to delete or keep Section 6.6. A motion was made by Phil Hopkinson to keep as much of Section 6.6 as possible and continue to review and modify as necessary (second by Hemchandra Shertukde). The motion carried with 37/38 member votes.

Poll Question #3 (Change to Section 7.2 Other mitigation methods)

Discussion ensued on whether to replace last paragraph of Clause 7.2 with new verbiage from Edgar Dullni. It was noted that along with prior contributions by Juliano Montanha (Siemens) and Pierre Riffon, additional mitigation methods are being discussed for inclusion in section 7.2 based on the submitted comments. Phil Hopkinson made a motion to accept the existing mitigation methods paragraph and add any new methods resulting from the meeting and future input (second by Vijay Tendulkar). The motion had no objections (*note: only 31/38 members approved in the 1 minute poll).

Poll Question #4 (Changes to Example A1)

Prior to the meeting Pierre Riffon, suggested the analysis should rather refer to the clauses in the main text rather than re-describing the phenomenon . Therefore Example A1 needs a revision. Further discussion was tabled until the next meeting.

Polling question #5 (changes to example A5)

It was suggested that Example A5 is not consistent and should be revised. With disconnecting switching, only the steepness of the breakdowns and the high number of breakdowns is decisive. Transformer resonances do not play a role. More information was solicited from the group and further discussion was tabled to the next meeting.

- 7) The mitigation methods task force had an update from Phil Hopkinson, but time ran out for a presentation. Motion was made by the chair to put Phil's presentation on the WG webpage without objection. The WG meeting slides and task force presentation have both been posted to the Transformers Committee webpage
- 8) New Business: none
- 9) Next Meeting: (Spring 2021 – Toronto, Ontario CA April 25-29)
- 10) Motion to Adjourn made by Hemchandra Shertukde (second by Phil Hopkinson). Meeting was adjourned at 3:35 PM without objection

Respectfully,
Thomas R. Melle
Secretary