

WG PD in Bushings & PTs/CTs – PC57.160

Meeting Minutes October 24, 2015 at 4:45 – Vancouver, BC Canada

Attendees: 57

Members attending: 20/34

Rosters: Circulated for members and guests.

Agenda: An agenda was presented for the meeting.

Essential Patent Claims: Text was displayed and the Chair inquired as to if anyone knew of essential patent claims. None were brought up during the meeting.

Minutes: Motion approved David Wallace (1st) & Pierre Riffon (2nd)

Items discussed based upon comments received:

A total of 17 comments were received for discussion many were editorial or minor in nature. Details of the discussion points are below.

Comments accepted and which will be in the next draft:

- Introduction – No introduction was provided in the draft. Thomas Sizemore proposed text. It was agreed to add text for this section. The exact text may change from the proposal upon review of the PAR.
- IEEE C57.13 was not in the list of references.
- 6.3.1 Figure 3 text is to be updated for consistency of wording which references test taps.
- 6.3.2.1 Pierre Riffon proposed text for the bushing section to match the instrument transformer section regarding measured PD limits after the calibration step.
- 6.4 It was proposed to move the list of abbreviations from 6.4 up in the document to 3.2 as they are used throughout the document.
- 6.4 Shibao Zhang proposed an editorial change from 'is' to 'are' to correct grammar.
- 6.4 Shibao Zhang proposed an editorial change in paragraph 1 to change the indication of bushing tap for consistency.
- 6.5.1 Shibao Zhang proposed to add the following text to the end of the section. "Calibration circuits in Figures 10 and 11 may be slightly adjusted to reflect the testing circuits in Figures 5, 6, and 9. However, the calibration injection points should always be the outlet of the capacitance C1 of the test object, points A and B. "
- 6.6.1 Pierre Riffon indicated that changes were needed to the procedure for DC bushings.
- Thomas Sizemore indicated that several figures need to be updated to improve consistency of line weights, etc. New drawings will be in the next draft.
- Figure 17 is labeled as a balanced circuit but it is an unbalanced circuit. It will be revised in the next version.
- Figure 10 is to be updated. One capacitor is not labeled and a dotted line box needs to be around the capacitor/signal.

- 7.2.1 Vladimir Khalin indicated that no explicit instructions were provided for the testing of line to line VTs. Thomas Sizemore provided text to cover this issue.
- The annex 'PD Measuring Circuits' covers many of the same topics as the guide. It was decided to remove it due to duplication.
- Annex A lacked an introduction or scope.

The follow comments were discussed but not accepted.

- 6.5.1 Jitendra Mamtora indicated a potential error in the calibrator circuits used in the guide. Upon discussion it was determined that the circuits he proposed are appropriate for power transformers not the types covered by this document.
- An additional pattern taken from an online monitoring system was discussed. It was not added as it was taken at the operating voltage not at the inception level.

Additional items discussed:

The wording of the PAR was discussed. It currently does not cover DC bushings which are in the draft document. The working group agreed to pursue a change in the PAR. Tom Provost indicated that he is willing to assist Thang Hochanh in this process.

Motion to adjourn: A motion was presented by David Wallace and was seconded by Detlev Gross.

Spring meeting 2017: This WG plans to continue working at the New Orleans meeting.

Next version of draft: A new draft is being prepared to incorporate all of the recent comments and also to modify the format to match the IEEE style guide.

Date: 2016-10-25
Secretary: Thomas Sizemore
Chairman: Thang Hochanh