

Working Group on Semiconductor Power Transformers – C57.18.10

Unapproved Meeting Minutes

**Omni William Penn Hotel, Pittsburgh, PA
Allegheny Room
11:00 am, March 27, 2018**

The Working Group met in the Allegheny meeting room

Sheldon called the meeting to order at 11:00am

There were 18 members and 20 guests present. A quorum was present (18 of 29 members).

The patent call was given. Nobody replied with any patent issues.

Don Ayers moved for approval of the minutes as written, Subash Sarkar seconded. The minutes of the November 2018 meeting in Louisville were unanimously approved as written.

Discussion of Draft 3 Revisions-

Sheldon and Bill went over the changes in Draft 3. Don Ayers mentioned that normative standards need to be referenced in normative text. Sheldon suggested the reference to 1653.1 in sections 9.1 and 9.2 be modified to state that IEEE 1653.1 takes precedence over C57.18.10 only if it is cited by the customer. Subash Sarkar made motion to accept this language, Dinesh Sankarakurup seconded the motion. Motion passed unanimously. A brief discussion about the need for the tolerances in 1653.1 followed. John John said that the calculation of eddy losses in bus bars is very difficult to calculate and he had sent comments to that effect. Sheldon said that there wasn't time to include that in the draft yet. Joe Foldi said that calculating Eddy losses in windings was easy while bus is hard is and is more like stray loss rather than eddy loss. Needs 3D FEA analysis and even that is difficult or impossible in most situations.

Paul Buddingh sent in information on high resistance grounding of rectifier transformers and the problems with resistance grounded drive transformers but there was not time to include in the draft yet. Craig Stiegemeier moved that this information be put into an annex, Vijay Tendulkay seconded the motion. Motion passed unanimously.

Old Business:

- Sheldon referenced Dinesh Sankarakurup's question from the last meeting about impulse testing of rectifier transformers- Standard refers to 12.90 and 12.91 for LV impulse testing. Should we mention LV impulse testing because rectifier transformers with multiple LV sections are often tested in non-standard ways? Should we cover how you test this type of LV winding? What about testing in cases where secondary impedance was too low to get a good impulse waveform? Sheldon talked about impracticality of doing impulse on large rectifier transformers. However medium voltage drive transformers are more amenable to impulse testing. Sheldon mentioned that multipulse drive transformers often have high common mode voltages that require special testing. David Walker mentioned that almost all drive transformers specify a modified applied voltage test to account for common mode voltages.

IEEE/PES TRANSFORMERS COMMITTEE

New Business:

- No new business

With no further business, the meeting was adjourned at 11:48am.

The Working Group will meet again at the Fall 2018 meeting in Jacksonville, FL

Chairman: Sheldon Kennedy

Vice Chairman: Bill Whitehead

Secretary: David Walker