

Working Group on Semiconductor Power Transformers – C57.18.10

Unapproved Meeting Minutes

**Astor Crowne Plaza Hotel, New Orleans, LA
Grand Ballroom D
11:00 am, April 4, 2017**

The Working Group met in the Grand Ballroom D meeting room

There were 41 people present. 11 members and 30 guests present. A quorum was present.

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

The agenda was approved unanimously.

The minutes of the October, 2016 meeting in Vancouver were unanimously approved as written.

Old Business

- Bill Whitehead updated the draft standard with new scope from PAR. Need to double check that PAR and Standard scopes are in exact agreement,
- Sheldon quickly reviewed the items discussed at the previous meeting.
- Sheldon reviewed the changes to the Draft Standard and urged the audience to review the changes and comment on the changes. Sheldon will send out the login and password for the Transformers Committee web site along with the minutes since most people couldn't read the Draft.
- Sheldon asked for a volunteer to add wording on interphase applications. Nobody volunteered and it was not clear who originally proposed this issue. Tabled for now.
- Interaction between transformers and breakers- The discussion was if the Standard should just note the issue or if it should add more information? No discussion on issue. Casey Ballard volunteered to write some wording about the issue for the draft.
- Non-classical harmonics and VSDs. David Walker volunteered to write something about non-traditional harmonics for inclusion in the Standard.
- Eddy Currents and Stray Losses- The current Standard uses fixed percentages in various windings. IEC does not have fixed percentages. Most manufacturers present in the meeting said that they used FEA for harmonic loss analysis. Subhas Sarkar- some customers don't understand the percentages and can misinterpret them so they should be removed. Sheldon Kennedy- Historically fixed percentages were conservative and tended to result in conservative (expensive) designs. Rick Marek- C57.110 has reduced some percentages and added some actual test data for reference. C57.110 is primarily for users who don't have design or FEA information and not for designers. Sheldon- C57.18.10 is for designers and FEA is recommended. Vijay Tendulkar- Recommended that we retain the existing information in the standard. Not everyone has FEA and it also gives customers a means of calculation. Chuck Johnson- There is free FEA software available. Numbers from 30 years ago aren't relevant. FEA is the only accurate method. C57.18.10 is not a user document and ought to give guidance to designers to make a cost-effective transformer. Harmonic loading and calculations should be a discussion between the designer and customer. Subhas Sarkar- moved that we delete percentage information from the standard. Motion seconded by Chuck Johnson. Dhuru Patel- proposed an

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amendment to the motion-move percentages to an annex. Vijay Tendulkar seconded motion. 11 in favor. Motion passed. Will need to change examples or move existing examples to the annex. Subhas to supply text for annex.

- Short Circuits on multipulse windings- No comments.
- High Resistance Grounding- Sheldon to ask Paul Buddingh to write something about it since it was his initial concern.

New Business:

- Call for new business- no responses.

With no further business, the meeting was adjourned at 11:51.

The Working Group will meet again at the Fall 2017 meeting in Louisville, KY

Chairman: Sheldon Kennedy

Vice Chairman: Bill Whitehead

Secretary: David Walker