

IEEE/PES TRANSFORMERS COMMITTEE

Dry-Type Transformers Subcommittee

Working Group on General Requirements for Dry-type Distribution and Power Transformers C57.12.01

Meeting Minutes

Charlotte, North Carolina USA Charlotte Westin Hotel Monday March 17, 2008

The working group met in the Trade room of The Charlotte Westin Hotel.

The meeting was called to order at 11:02 AM by Chairman John Sullivan

The meeting was convened with ten (10) members and eight (8) guests present.

Introductions were made and minutes of the Minneapolis October 15, 2007 meeting were approved.

Attendees were asked if they knew of any patents that may be related to the work of this working group. No patents or patent claims pertinent to C57.12.01 were identified by working group members.

Task force reports and discussion:

Table 5 – John Sullivan

Chuck Johnson reiterated to the working group that to correct Table 5 note “a” to Table 5 must be removed. Note “a” was only applicable to the two tables published in the previous edition of C57.12.01. Table 5 replaced these two tables in C57.12.01-2005. Note “a” was inadvertently brought forward into the 2005 issue of the standard during revision. Carl Bush agreed that removal of note “a” and adding an explanatory clause explaining the table would satisfy his concerns with Table 5.

Discussion about how to address this issue took place. Rick Marek suggested the errata process to remove note “a.” The working group agreed by consensus. The Chair will pursue obtaining an erratum.

Partial Discharge – Yunxiang Chen

Yunxiang Chen presented an extract of IEC 60076-11, Partial discharge. He also displayed several partial discharge test reports from European manufacturers. These reports indicate transformers under test are essentially partial discharge free at the 160% voltage level that extinction occurs between 200% and 160% voltage level .

Yunxiang Chen asked, “How does C57.12.01 want to address partial discharge?” Chen proposed harmonization with the IEC standard. Don Kline suggested we determine what is necessary to harmonize with IEC. He also expressed the need to address extinction voltage levels for various temperature classes. Rick Marek suggested we adopt the IEC tests. Chuck Johnson feels we must harmonize with IEC to retain the relevancy of C57.12.01. The general consensus was to harmonize with IEC. The chair requested a motion to that effect. Rick Marek made the motion that C57.12.01 adopt the IEC partial discharge test criteria: A phase-to-phase pre-stress voltage of 180% rated voltage shall be induced for 30 s followed without interruption by a phase-to-phase voltage of 130% rated voltage for 3 min, during which the partial discharge shall be measured. Extinction must occur by 130% rated voltage. The maximum acceptable partial discharge level is

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10 pC. The motion was seconded by Yunxiang Chen. Discussion of the motion centered about being able to review and revise the partial discharge test requirements before inclusion into a final revision of the standard. Working Group members will have an opportunity to review and revise the requirements before its inclusion into any future revision of the document. The motion carried unanimously.

Proposal for a change to paragraph 4.2.5 – Rick Marek

Rick Marek presented his proposal to revise clause 4.2.5. After some discussion it was decided to look at the possibility of adding a formula from IEEE STD 4 and an explanatory clause instead of the table. Rick will look into this prior to the next meeting.

Old business

There was no old business.

New business

Yunxiang Chen brought up a problem performing hi-pot tests where transformers were part of a switchgear package. Transformer test criteria is based on 34.5 kV and switchgear test are based on 36 kV. He suggested changing the C57.12.01 requirements to 36 kV. Chuck Johnson brought out the fact that getting the transformer or the switchgear manufacturers to change would probably be impossible. Further, since the transformer is a component, it should be tested at the manufacturers rating, 34.5 kV.

Next meeting: Fall 2008: October 5-9 -- Porto, Portugal

With no further business, the meeting was adjourned at 12:14 PM.

Chairman: John Sullivan

Secretary: Anthony Jonnatti