TF Core Gassing in Distribution Transformers

Chairman: David Buckmaster, Secretary: Donald Ayers

The initial meeting of the task force met via phone conference on Friday, June 6, 2014. All members who called in became members of the task force. See attendance sheet attached.

The task force meeting was called to order at 10:00 a.m. EST by David Buckmaster. Performance Characteristics Subcommittee Chairman Ed teNyenhuis introduced the purpose of the task force and stated that David Buckmaster had agreed to accept the chairmanship of the task force. David Buckmaster then presented a brief overview of the problem to be discussed and laid out the agenda.

Phil Hopkinson proceeded to make a presentation on the causes of core gassing in transformers focused primarily on 4 - loop, wound core type construction. The presentation presented the history of core gassing, an analysis of the type of gases generally generated, possible causes, tests to detect the potential for core gassing and possible solutions to correct the problem.

Don Platts expressed concern about setting precedent in a Standard without sufficient information, support or research and that it was not within the scope of C57.12.00.

Tom Prevost stated he supported the research and the need to alert the industry but has concerns, at this point and would vote negative. He wants to see additional meetings and discussions before making final decision.

Ramsis Girgis stated that he would not support including in the IEEE Standards the details of the cause of the gassing and method of correcting it, for example, adding the ground shield. He would support a general description of the phenomenon and a PD test in C57.12.90.

Donald Ayers suggested that putting possible solutions in an Appendix may resolve issue. Ramsis also suggested that it would be preferable to have the detailed information in a technical paper.

Relative to levels of gassing that cause concern, it was agreed that no real standards exist and that levels should not be arbitrarily established without more review of existing data. Also, typical values of the H2 / CH4 ratio, associated with this phenomenon, were discussed. A 100:1 ratio was stated but Ramsis stated that the data he examined showed a ratio that is more in the 6 – 10 range. Phil Hopkinson agreed to send to the task force members some of the data he used in recommending levels of gassing and levels of partial discharge during test.

It was agreed that more discussion and sharing of data is necessary before any vote is taken on the language to include in the standards.

A second phone conference was established to take place on Friday, July 11, 2014 @ 10 am EST. Dave Buckmaster will send information out as to how to connect.

The phone conference was adjourned at 12:20 p.m.

Respectfully submitted,

Donald E. Ayers
Secretary

June 8, 2014

Submitted with Typographical corrections

David E. Buckmaster
Chairman
June 9, 2014

Attendance:

Phone conferees requesting membership:

David Buckmaster
Phil Hopkinson
Steve Shull
Don Ayers
Ali Ghafourian
Wally Binder
Tom Prevost
Steve Snyder
Mahesh Sampat
Jeewan Puri
Jerry Corkran
Gary King
Gary Hoffman
Ed teNyenhuis
Don Platts
Aniruddha Narawane
Ramsis Girgis

Phone conferees not requesting membership:
Bryan Marquardt
Jerry Schoen
Steve Griffith
Tommy Magee
Mike Iman
Erin Spiewak – IEEE Coordionator