

## **10.6 Insulating Fluids Subcommittee – F. J. Gryszkiewicz, Chair; R.K. Ladroga, Vice-Chair**

### **10.6.1 Introduction/Attendance**

The Insulating Fluids Subcommittee met in Las Vegas, Nevada on Wednesday, October 27, 2004 with 18 members and 28 guests present. Four guests requested membership on the Subcommittee.

### **10.6.2 Approval of Meeting Minutes**

The Minutes of the San Diego meeting were approved as written.

The Transformers Committee had received a letter of concern related to the attachment letter included with the Insulating Fluids Subcommittee Meeting in Pittsburgh, Pennsylvania. At the San Diego meeting, the Committee Officers stated that they would review this concern with IEEE as a follow-up to its initial review with IEEE when this letter was presented for inclusion in the Minutes. Upon completion of that review, a decision will be made as to any changes and notifications needed related to the Minutes.

In view of the foregoing, the Minutes of the Pittsburgh meeting were approved with Exception noted to inclusion of the subject letter included with the Insulating Fluids Subcommittee Minutes, subject to review with IEEE, and final determination of the status of this item in the Minutes.

The Subcommittee Chair reported that this matter has been resolved. In view of the foregoing, the Insulating Fluids Subcommittee Minutes of the Pittsburgh Meeting stand approved as originally written.

### **10.6.3 Subcommittee Membership**

There were no changes to report in the Subcommittee Roster.

### **10.6.4 Current Subcommittee Business**

#### **10.6.4.1C57.106 – IEEE Guide for Acceptance and Maintenance of Insulating Oil in Equipment**

Jim Thompson and T.V. Oommen are the Co-Chairs of this Working Group. The Working Group met on Tuesday, October 26, with 10 members and 38 guests in attendance.

As required in the IEEE Standards Board By-law, Section 6.3.2, the IEEE patent disclosure requirements were discussed and a request was made for disclosure of any patents that may be related to the work of the Working Group. There were no responses to the request for disclosure.

The WG Chair again emphasized that the scope of the Guide applies to “mineral insulating oil” and not to moisture in paper issues. The Working group reviewed Draft 3.V2 of the suggested revision of Section 4.5. No comments were received from the group on this section.

There was a considerable amount of discussion on the water content values to be included in Table 7 of the Guide. T.V. Oommen volunteered to address this issue in Table 7. The Working Group will review T.V.’s recommendation at their next meeting in Jackson.

#### **10.6.4.2C57.104 – IEEE Guide for the Interpretation of Gases Generated in Oil – Immersed Transformers**

This Working Group is Chaired by Frank Heinrichs. A Standards Association Ballot was recently conducted on Draft 11D. Sixteen negative ballots were received. The Working Group, previously, had agreed to participate with IEEE Headquarters in an experimental procedure where negative ballots will be resolved or rebutted via a website based and teleconferencing procedure. A ballot resolution team has been set up to begin work on the resolution process.

#### **10.6.4.3 C57.130 – Trial Use Guide for the Use of Dissolved Gas Analysis During Factory Temperature Rise Tests for the Evaluation of Oil- Immersed Transformers and Reactors**

This Working Group is Co-Chaired by Frank Heinrichs and Frank Gryszkiewicz. A Standards Association Ballot was recently conducted on Draft 14 of this document. Ten negative ballots were received. An attempt has been made to resolve the negative ballots and Draft 15 of the document has been sent to IEEE for a Recirculation Ballot.

#### **10.6.4.4C57.139 – IEEE Guide for Dissolved Gas Analysis of Load Tap Changers**

The Working Group, which is chaired by Fredi Jakob, met on Tuesday, October 26, with 22 members and 24 guests in attendance. The following seven guests requested membership on the Working Group:

Danny Bates	Van Nhi Nguyen
Craig Colopy	Paul Pillitteri
Donald Fallon	Bengt-Olof Stenestam
Bernhard Kurth	

As required in the IEEE Standards Board By-law, Section 6.3.2, the IEEE patent disclosure requirements were discussed and a request was made for disclosure of any patents that may be related to the work of the Working Group. There were no responses to the request for disclosure.

In the past, the Working Group had a difficult time agreeing on dissolved gas analysis (DGA) limits for the different design load tap changers. In view of the foregoing, it was decided to use “generic limits” of the combustible gases of interest for the various design types of load tap changers. A Task Force has been assigned to develop a generic description of each LTC.

Absolute values and ratios of the various combustible gases would be used in determining whether the DGA data is indicative of a tap changer problem. The ratios discussed were Ethylene/Acetylene, (Methane + Ethane + Ethylene)/Acetylene, Ethane/Methane, and Ethylene/Ethane. The WG Chair asked those present at the meeting to send their DGA data to him so that enough data could be accumulated for a statistical analysis to be performed.

The Working Group will prepare a new draft, which will be discussed at the next meeting in Jackson, Mississippi.

#### **10.6.4.5C57.146 – IEEE Guide for the Interpretation of Gases Generated in Silicone Immersed Transformers**

This document previously carried the IEEE designation P1258. This has been changed to the IEEE designation C57.146 to be consistent with the other standards in the C57 collection.

Jim Goudie and Bill Bartley are the Working Group Co-Chairs of this project. A Standards Association Ballot was recently conducted. One negative ballot was received. The negative ballot was resolved and the Subcommittee voted to send the document to the Standards Board for approval.

#### **10.6.4.6 C57.147 – IEEE Guide for the Acceptance and Maintenance of Natural Ester Based Fluids**

Patrick McShane is the Working Group Chair. The Working Group met on Tuesday, October 26, with 15 members and 50 guests in attendance. Six guests requested membership on the Working Group. Clair Claiborne of ABB was nominated and approved for the new position of Working Group Vice Chair.

The Working Group meeting was then called to order by the WG Chair, Patrick McShane. As required in the IEEE Standards Board By-law, Section 6.3.2, the IEEE patent disclosure requirements were discussed and a request was made for disclosure of any patents that may be related to the work of the Working Group. ABB indicated that they were working on preparing a response to the patent disclosure.

The Working Group reviewed Draft 5, through Clause 5.3.1, of the Guide. The comments received will be incorporated into Draft 6 which the WG Chair expects to send to WG members in two-three months.

#### **10.6.5 Adjournment**

The Subcommittee adjourned at 12:00 noon.

#### **10.6.6 Next Meeting**

The Insulating Fluids Subcommittee and its Working Groups will next meet in Jackson, Mississippi during the period of March 13-17, 2005.