UNAPPROVED MINUTES
SC Insulating Fluids Meeting
April 11, 2011

San Diego, California USA

TF on Particle Count Limits– Report for P. McShane

Report given at the Sub-Committee Meeting: **TF meeting minutes (unapproved) as received:**

Mark Scarborough– Chair, T.V. Oommen- Vice-Chair , Paul Boman - Secretary

Meeting Date: April 11, 2011 Time: 1:45 – 3:00 PM

Attendance: 19 members out of 36 members were in attendance, total attendance was 67 and 8 people requested membership. At the beginning of the meeting during roll call we only had 16 members present, so the meeting proceeded as without a quorum.

The meeting was called to order at 1:45 PM. Attendance rosters were circulated.

The following agenda was followed:

1. Introductions & Roster
2. Patent Disclosure
3. Origins
4. Activities Since Fall 2010 Toronto Meeting
5. Member List / Quorum
6. Approval of October 27, 2010 Minutes
7. Purpose / Scope
8. Survey / Survey Results
9. Summary of Survey
10. Next Steps / Discussion
11. Adjournment

The IEEE Patent Disclosure policy was reviewed. No patents were disclosed.

Attendee introductions were made by group.

Since we did not have a quorum at the beginning of the meeting, we were not able to vote on the approval of the October 27, 2010 Fall Meeting Minutes as written. The Chair sent out a survey request to all TF Members and asked them to vote. Only 5 have responded. All responses were positive. TF Members are requested to access survey sent via e-mail and vote on the approval or disapproval of the meeting minutes from October 27, 2010.

Purpose and Scope were reviewed and an on-line survey vote was e-mailed to TF Members. TF Members were requested to access the survey and respond by April 22, 2011.

The on-line Particle Counting Survey issued October 18, 2010 to 475 individuals received 71 responses as of 3/24/11.

Chairman reviewed particle count on-line survey responses question by question showing the results. The presentation has NOT been made available on the IEEE Transformer Committee – Insulating Fluids web site. Further discussion with the Insulating Fluids Chair on posting the results is needed.

The survey results have been normalized by the chairperson contacting individual respondents asking for clarification on responses. Not all respondents replied and it was noted on the presentation.

Sample bottle cleanliness standards were discussed. Additional review of this information needs to be performed by the TF.

Discussion comments after presentation:

Marc Cyr supplied information on bottle cleanliness as listed in ASTM D6786-08 Section 8.1 as repeated below.

8. Materials

8.1 *Particle-clean Bottles*, recommended sample containers are cylindrical bottles made of polypropylene, polystyrene, PET, or glass with flat bottoms, fitted with a suitable non-shedding threaded cap. Bottles should be at least 100-mL capacity. The bottles shall meet the cleanliness criteria of contributing less than 1 % of the total particles expected in the cleanest sample.

ASTM D6786-08 does have a sampling procedure. This is to be reviewed by the TF. TF is to looking into feeding back comments to ASTM on the standard.

Don Platts made comments concerning survey:

- About 66% of the respondents do not have particle limits.
- Does not agree with many of the results of the survey.
- Large number of survey questions invites confusions (>6 questions) and conflicting results.
- Respondent #4 under Question #24, 25, and 26 cited purchaser's specification has been written to help manufacturer to pass acceptance testing.
- Purchasers should not be dictating particle count limits to manufacturers. There are other tests such as ASTM D1816 that is sensitive to particles and particle counting should not be used as an acceptance test parameter.
- Supportive of particle counts as a diagnostic tool but not supportive using particle counts as part of an acceptance test.

Don Platts put forth a motion to disband the Task Force.

No one would second the motion to disband the Task Force.

Others in the audience suggested that the Task Force step back and look at what is really valuable from particle counting.

Chair asked for origins of ASTM D6786 - Standard Test Method for Particle Count in Mineral Insulating Oil Using Automatic Optical Particle Counters

Clair Claiborne provided historical background on the ASTM method.

Harold Moore commented that particle counts are an important diagnostic tool but does not believe limits are needed at this time.

A request has made to several labs to mine their data bases samples that have been tested for particles.

Two (2) other attendees stated that particles are very important to HVDC transformers.