Report to ADSCOM

IEEE PC37.301 (1291), Montréal, Québec, 4 October 2001

1. Meeting

The WG met on 4 October 2005; 17 members and 3 guests attended the meeting. The WG have now 20 active members.

2. Patents

IEEE slides shown. No patent issues known by participants.

3. Résumé of discussion

3.1. PAR

Par have been approved on 22 September 2005. The document is upgraded from a Guide to a Recommended Practice… and the number change from 1291 to C37.301.

The Scope (item 13), Purpose (item 14) and Reason (item 15) of the IEEE SA approved PAR defines the frame of reference and the goal of the work we have to do (see Annex A or excerpts of the PAR form).

The target is to have a document very close or for approval by spring 2008; the balloting should thus start early in 2007.

3.2. Reference documents

IEEE HQ already provided us the standards they are allowed to (have a copyright agreement).Regarding other standards (i.e. CSA..) that IEEE have no copyright agreement, we shall be cautious not to infringe copyrights. Those having a copy of these documents are to review those and bring to the WG what could be useful to the WG.

3.3. Draft 0

Chair will shortly start putting on draft 0, from the actual 1291 document, using IEEE SA most recent template and according to latest IEEE SA style manual.

3.3.1. Bibliography

Bibliography search have been made and sent to members and guests. Most of these papers are non IEEE papers; we will then have to make special arrangements with IEEE

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HQ to get these. Members to review the papers abstracts and rank them A (needed), B (usefull) or C (may be), comments and recommend other papers. A task force is formed to review the bibliography and produce a technical background document from these papers (to be an informative annex or an IEEE paper). The TF on bibligraphy will be coordinated by the WG chair, Marcel Fortin, and Mike Wactor, Bob Behl, Larry Farr and Chung Lam.

3.3.2. Expectations

Expectations expressed at the spring 2005 meeting (meeting # 2005-1) altogether with comments received on reaffirmation are reviewed.

3.3.3. Definitions

A compilation of definitions contained in 1291 and other reference documents have been circulated. Members to review these definitions and compare them to identify the most pertinent for our document.

4. WG decision list

- To analyse the bibliography, extract the technical background and produce a document that will become an informative annex and/or an IEEE technical paper.

5. Course of action

1- **Non-available standards** : those having a « legal » copy of standards that IEEE was not able to provide us will review these and report to the WG spring 2006 meeting (short summary document 3 weeks before the spring 2006 meeting)

2- **Bibliography:**

   a. **Members and Guests:** to review and rank the abstracts (attached bibliography ranking document. **Deadline:** end of November 2005

   b. **Chair:** get the prioritized (at least category A and if possible B) documents and send complete copies to TF members. **Deadline:** end of January 2006

   c. **TF Bibliography members:** review papers and summarise the useful background technical information. **Deadline:** preliminary draft for spring 2006 meeting.

3- **Definitions:** members to review the definitions for the spring 2006 meeting.

4- **Draf 0:** chair to transfer the actual 1291 on the most recent IEEE SA template.

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5- **Draf 1:** chair to start revising the document (introduction, titles, scope, purpose…). **Deadline:** sent to members 1 month before the spring 2006 meeting.

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10 October 2005

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Annex A : Excerpt from the 22 September 2005 approved PAR

13. Scope of Proposed Project:

This recommended test procedure applies to the detection and measurement of partial discharges occurring in switchgear equipment and/or components rated above 1000 V. The following types of equipment are included: high-voltage fuses, high-voltage switches, high-voltage circuit breakers, reclosers and sectionalizers, pad-mounted switchgear and switchgear assemblies.

14. Purpose of Proposed Project:

The electrical PD measurement has been proven since many years as a valuable tool for assessment of the insulation condition of HV equipment. The procedure is preferably performed on the basis of the PD quantity apparent charge using either the wide-band or a narrow-band measuring method. This Recommended Practice covers only the wide-band method that allows partial discharge pattern recognition. This recommended practice: defines the terms used; defines the quantities to be measured; describes test and measuring circuits which may be used; defines analogue and digital measuring methods required for common applications; specifies methods for calibration and requirements of instruments used for calibration; gives guidance on test procedures and test set-up; gives some assistance concerning the discrimination of partial discharges from external Interference. Partial discharge limits and specific test procedures are not part of this recommended practice and shall be defined in particular product standards.

15. Reason for the Proposed Project:

Since the adoption of the actual Guide many development and improvements have been introduced in partial discharge measurement techniques and instrumentation and in digital treatment of readings. More and more IEEE PES Switchgear Committee standards (i.e. C37.60, C37.74, C37.63 …) ask for partial discharge tests, as type tests and routine tests. More detailed recommended practices, test procedures and pattern recognition data are need for better application of these standards. Concerns have been raised regarding in-situ partial discharge test on switchgears and switchgear assemblies and the use of partial discharge measurement to assess the quality of insulating material of apparatus being in service for some time. It will provide manufacturers and users comprehensive

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common recommended practices to perform partial discharges tests on switchgears and switchgears assemblies.

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