

MINUTES OF THE MEETING OF THE HVDC CONVERTER TRANSFORMERS & SMOOTHING REACTORS S.C. IN SAN DIEGO, CALIFORNIA, APRIL 11, 2011

On April 11, 2011, the HVDC Converter Transformers and Smoothing Reactors S.C. met at 1:45 p.m., in the Rousseau E-W Meeting Room of the Catamaran Resort Hotel, in San Diego, California. There were 12 members and 13 guests present. The total membership of the SC is 26, but includes 3 corresponding members. Therefore there was a quorum. The following are the highlights of the meeting:

1. Introductions were made and the attendance list circulated.
2. The minutes of the Toronto, Ontario meeting were approved.

Note: The minutes of the San Diego SC meeting will not be approved until the SC meeting in Boston.

3. IEEE patent policy was reviewed and no issues were raised.
4. The Chairman provided a synopsis of the Administrative SC meeting.
5. The Chairman, as a follow up to e-mails, stated that he was retired from full time employment and that it was his intention to step down from his position as chairman of the HVDC SC at the end of the year or at the latest at the end of 2012. In preparation for this action the chairman asked for a volunteer to become vice chairman/secretary of the SC. As no one volunteered the chairman stated that he would ask SC members to consider the position and let him know if they were interested. The chairman also stated that he would talk to long time SC members re this position.
6. The converter transformer standard IEEE C57.129 will reach its "end of life" at the end of 2012. Discussions took place re future revision work. Since HVDC projects are now in service at 666kV and 800 kV it was agreed that the focus of this revision work should be to extend the applicability to 1100 kV. Should the voltage test tables be extended to these levels or should test levels be specified on a project basis. Another alternative may be to include equations to calculate test levels. IN order to provide more background Ulf Radbrandt volunteered to make a presentation at the Boston SC meeting on test levels; with a focus on higher HVDC operating voltages. At this point in the meeting more discussion took place re IEEE's proposed new 10 year life for standards. The chairman stated that he would attempt to find out more re the details.
6. Les Recksiedler made a PowerPoint presentation on converter transformer failures that he was in the process of investigating. The purpose of the presentation was to provide background re possible future SC work projects or modifications to test code in IEEE C57.129. To-date Les had insufficient information from the failure investigation re root cause to define any possible test code changes. However this presentation prompted discussions re other possible work areas for the SC. Since there are many

old HVDC systems in operation life assessment is an issue. CIGRE are doing work in this area; life assessment of converter transformers and oil-immersed SMRs. Should the SC consider a life assessment guide or can this be handled in an annex? Design review was also discussed as a possible vehicle to prevent premature failures such as those experienced and covered in Les' presentation. CIGRE has published a design review guide in booklet format. Should the SC consider producing a design review guide or should the subject be covered in some detail in an annex in both IEEE C57.129 (Note that a brief annex is included in the current version.) and IEEE 1277? This presentation will be posted on the Transformers Committee website with the minutes.

The Chairman requested that SC members prepare presentation material on future work for the Boston meeting as a basis for discussion and to provide more direction for future revision work on IEEE C57.129 and IEEE 1277 and/or guides on design review and life assessment.

The meeting adjourned at 3:00 p.m.

Richard Dudley, Chairman

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