MINUTES OF THE MEETING OF THE HVDC CONVERTER TRANSFORMERS & SMOOTHING REACTORS S.C. IN SAN DIEGO, CA, MAR. 8, 2004

The S.C. met in the Cockatoo Meeting Room of the Catamaran Resort Hotel in San Diego, CA on Mar. 8, 2004 from 1:45 p.m. to 3:00 p.m. There were 12 members and 4 guests present. One of the guests, Roger Verdolin requested membership. Note also that one new member was added since the Pittsburgh meeting; Tony Weekes of Manitoba Hydro. The following are the highlights of the meeting.

- 1. Introductions were made and the minutes of the Pittsburgh meeting were approved. The S.C. was briefed re the Administrative S.C. meeting.
- 2. The life of the current version of C57.129 will expire in Sept. 04. After some discussion it was agreed by the S.C. to seek a PAR for the revision of C57.129 vs the reaffirmation option. The Chairman stated that he would work with Bill Chiu, the Standards Subcommittee Chair, to obtain a PAR.
- 3. Tony Weekes of Manitoba Hydro made a presentation based on a paper he coauthored; "Risk Assessment Using Transformer Loss of Life Data". A copy of his presentation and the paper will be distributed to S.C. members only with the minutes. A brief introduction and reference to the paper will be included in Annex D "Overloading of HVDC Converter Transformers". (See 6. below).
- 4. Peter Heinzig's proposed addition to Annex D on how to specify overloads will be included in the next draft of Annex D.
- 5. Lars-Erik Juhlin made a presentation of his analysis of the information contained in the report prepared by Cigre TFB B4.04/42 on converter transformer failures; "Analyses of HVDC Converter Transformer Performance". Very few of the failures could have been prevented by changes in the test code for converter transformers. A number of bushing failures could have been impacted by test code. A copy of Lars-Erik's analyses will be provided to the Bushing S.C. Two converter transformer failures might have been influenced if Dissolved Gas Analyses were part of the temperature rise test; especially one related to a bad connection. However, since the temperature rise test only reflects the overall heating effects of harmonics, DGA may not indicate a problem that could occur due to possible localized overheating in service. Lars-Erik's analysis will be used in the process of the revision of the test code in C57.129.
- 6. Peter Heinzig will produce a draft revision of Annex D including the specification of overload criteria and will also incorporate a reference to Tony Weeke's presentation/paper. He will then send the new draft to Pierre Riffon, Waldemar Ziomek and Lars-Erik Juhlin for their comments/input.

- 7. Les Ricksiedler will make changes to Draft #1 of the revision of C57.129 based on comments/proposals in his e-mail of Aug. 22, 2003. He will, when appropriate, include explanatory comments in the margin. Les's changes will be circulated to S.C. members for comment as part of Draft #2 of the revision of C57.129.
- 8. Lars-Erik provided, for information to S.C. members, a copy of the portion of the most recent catalogue of CIGRÉ publications, dealing with transformers.

The Chairman will issue Draft #2 of the revision of C57.129, based on S.C. member contributions as outlined above, prior to the next S.C. meeting. The meeting adjourned at 3:00 p.m.

Richard F. Dudley

RFD:jl (0414)