

**SWITCHGEAR ASSEMBLIES SUBCOMMITTEE
MINUTES OF THE SPRING, 2003 MEETING**

**TRADEWINDS SIRATA BEACH RESORT & CONFERENCE CENTER
ST. PETE BEACH, FL**

The meeting was called to order by Chair D. Lemmerman at 1:33 PM on May 7, 2003 with the introduction of the following members and guests:

Members:	C. Ball T. A. Burse E. R. Byron P. Dwyer	D. J. Edwards S. S. Gohil D. J. Lemmerman A. Livshitz	D. Mazumdar A. F. Morgan P. J. Notarian T. W. Olsen	R. J. Puckett J. E. Smith S. H. Telander M. Wactor
Guests:	W. Bradley L. Davis K. Gray R. Kyle	J. Lord F. Mayle A. Monroe	I. Shteyh S. Siedzik A. D. Storms	C. Z. Tailor W. Von Miller T. Williams
Excused:	J. J. Dravis R. K. Iyer	J. M. Jerabek W. E. Laubach	G. R. Nourse E. A. Peters	G. Sakats S. P. Slattery
Absent:	none			

The minutes of the Fall, 2003 Switchgear Assemblies Subcommittee meeting in Galveston, TX, were amended as follows, and accepted as amended:

- In the first sentence, change “at 1:33PM on May 1, 2002” to “at 1:38PM on October 2, 2002”.
- Delete the second sentence “The meeting ... on October 2, 2002”.
- Under “Old Business”, change the reference to IEC 40466 to IEC 60466.

ADSCOM Report

ADSCOM Committee Report: Mr. Lemmerman reported that:

- Background on standards development: A scheme to capture background information on the development of a standard was discussed. An informative annex was suggested, or a transactions paper. No decision was released.
- C37.20.6: ADSCOM would like to move this to a subcommittee, but it was agreed that no single subcommittee controls all aspects of the requirements. C37.20.6 is on the agenda for the Standards Board meeting in June, 2003 for reaffirmation. Comments received with the reaffirmation ballots will be forwarded to Switchgear Assemblies subcommittee, to be held for consideration during the next revision project. It was agreed that Switchgear Assemblies subcommittee will provide the WG chair for the next revision.
- Switchgear Committee shirts: It is planned to make a Switchgear Committee shirt available for sale.
- Mega-Documents: There is a move to combine related documents together in a single large document, such as is occurring with switch documents. No decision was reached.
- Fault current limiters: Discussion of the possible need to develop a standard for such devices occurred, but no decision was reached. A presentation may be made at the Fall, 2003 meeting.
- IEEE-SA has been asked to assist with reformatting of transferred C37 documents (e.g., C37.22) to conform to the IEEE Style. In some cases, the transferred documents are not electronic. Before undertaking revision of any “old” standard, the electronic version (.pdf file) should be carefully checked compared to a printed copy. A number of errors in the .pdf files have been found. In essence, don’t trust the .pdf file. (see new business).

- Standards references to draft documents. We will be able to continue to reference draft documents, but the document must make it very clear that the reference is an unapproved draft and subject to change.
- Contact information on the Switchgear Committee website: Any person may request that information be deleted from the Switchgear Committee address list by request to T. Burse.

WORKING GROUP REPORTS

The following working group reports were presented:

- C37.20.7a (Guide for Application of Equipment Qualified as Medium-Voltage Metal-Enclosed Arc Resistant Switchgear): M. Wactor reported that the effort to produce an application guide will continue. Separately, a discussion of problems experienced in the use of the existing C37.20.7 occurred. It was decided to initiate a PAR for revision of C37.20.7, to include the development of an annex Application Guide.
- C37.21 (Control Switchboards): D. Edwards has submitted for editorial review. Comments received from the working group were reviewed. The next draft will be submitted for ballot in June with the objective of having ballot results and comments for the meeting in Fall, 2003.
- C37.23 (Standard for Metal-Enclosed Bus): The D11 ballot closed on Oct. 30, 2002 with 92% affirmative and 193 comments. E-Mails and a phone conference were used to reach consensus on resolution of the comments. The recirculation ballot for D12 closed on Mar. 30, 2003 with 98% affirmative and 14 comments. The sole negative ballot was deemed to be unresolvable, and D12 has been submitted to the Standards Board for final approval at the June, 2003 meetings. The revised PAR with revised title and corrected "scope" is scheduled for approval in mid-May. Also, a new copyright permission from McGraw-Hill has been requested but not yet received. This may hold up final approval.
- C37.24 (Guide for Evaluating the Effect of Solar Radiation on Outdoor Metal-Enclosed Switchgear): A recirculation ballot for D7 conducted, with 98% affirmative and one unresolvable negative. D7 has been submitted to the Standards Board for final approval at the June, 2003 meetings.
- C37.100.1 (Common Clauses Working Group): Mr. Storms reported that final revisions will be made and the document will be submitted for ballot this summer. Coordination is being maintained with ongoing IEC 60694 revisions, with a revised IEC 60694 CD expected in June.

OLD BUSINESS

- Application Guide for dealing with arcing faults: See the report for C37.20.7a above. This will be made an annex of a revised C37.20.7.
- IEC Activities (SC 17C MT 14):
 - IEC 60298 (62271-200) [AC Metal-Enclosed Switchgear and Controlgear for Rated Voltages above 1 kV and up to and Including 52 kV]: The Maintenance Team met twice since the last Switchgear Assemblies Meeting to revise the document in accordance with the results of the CDV. The document has been sent to Geneva for distribution as an FDIS in May of 2003. The statistical equivalence of the 3 X 9 and the 15 X 2 impulse test sequence was called into question, but the document will continue to contain the reference to Procedure C of IEC 60060-1 for criteria to pass the impulse test.
 - Preferred voltages for consideration by the IEC 60694 working group. T. Tobin has created a list of preferred voltages for circulation to interested parties, and subsequently to IEC. The most significant issue would be that 15.0kV would be deleted and replaced by 15.5kV.

- Impulse testing: IEC has previously accepted the viability of the 3X9 impulse test procedure, in addition to the 2X15 test. They seem to be backing away from this, and we are fighting to maintain recognition of the 3X9 impulse test procedure.
- IEC 60466 [AC Insulation-Enclosed Switchgear and Controlgear for Rated Voltages above 1kV and up to and including 38kV]: IEC 60466 will be revised. Experts in this field are being solicited for input to this effort.
- Switchgear Assemblies document status review: The document status summary was distributed and revisions solicited. This lists all documents that this subcommittee sponsors or co-sponsors. It will be available with the minutes. C37.82 is in need of reaffirmation, and the task force for review of "old" documents as compared to the IEEE .pdf file is requested to give priority to C37.82.

NEW BUSINESS

- ASC C37 – T. Olsen reviewed progress in the actions adopted at the Fall, 2002 meeting. The documents that were to be transferred from ASC C37 to IEEE were transferred in January, 2003. Two documents (C37.17 and C37.22) were reaffirmed in January, 2003 prior to transfer. Approximately 8 documents, primarily dealing with conformance testing, will be retained in ASC C37. New operating procedures for ASC C37, converting it to a sole secretariat, had been previously approved. The documents remaining under NEMA sponsorship are available for free downloading from the NEMA website. They are also included in the IEEE Switchgear Standards Collection.
- Checking of .pdf files: The subcommittee voted to form a task force to review documents under our control that were converted to electronic form by IEEE. The "at risk" documents are believed to include C37.20.6, C37.81, C37.82, and C37.121. The task force members are listed below, along with the document that the person will "champion":

T. Burse	C37.20.6
D. Lemmerman	C37.121
A. Morgan	C37.82
T. Olsen	C37.81

The initial objective is that the first review of all of these documents will be completed by June 9. A telephone conference will occur thereafter to discuss findings and future action.

- Meeting Rooms- Working group chairs, please submit your WG room requests for the Fall 2003 meeting to Mr. Burse by July 1, 2003. Working groups are asked to carefully consider any audio visual equipment requirements, as A/V equipment is a major expense.
- Working group chairs were requested to give changes to working group memberships to T. Olsen by the end of the meeting.
- Working Group chairs are requested to provide electronic copies of reports to T. Olsen by May 8.
- ADSCOM- items from ADSCOM meeting requiring attention by the subcommittee.
 - Do we have any document that we would like to submit for consideration as dual-logo standards? C37.24 may be a candidate for consideration for dual-logo status at such time as the dual-logo process is more completely understood.
- "Hybrid Switchgear" - J. Smith requested consideration of several questions about hybrid equipment.
 - What standard applies to equipment with an isolator and a fixed-mounted circuit breaker?
 - What standard applies to equipment with a drawout circuit breaker that is not metal-clad? C37.20.2? C37.20.3? Both? Neither?

- The subcommittee discussed the issue, including the earlier discussions that took place at the Fall 2000 and Spring 2001 meetings, wherein it was decided that a group of equipment with a stationary switch installed falls under the metal-enclosed (C37.20.3) category.
- A formal request for interpretation may submitted to the following:
 - IEEE-SA Standards Board Secretary
 - 445 Hoes Lane, PO Box 1331
 - Piscataway, NJ 08855-1331
 - d.ringle@ieee.org

- Future standards development: Mr. Telander provided some thoughts regarding the future of low voltage switchgear standards:
 - Recently, C37.23 was approved including momentary tests on low voltage metal-enclosed bus in the image of medium voltage testing, including a 10-cycle momentary withstand test. This exceeds the 4-cycle equivalent in C37.20.1 (this was recognized and accepted within the C37.23 WG).
 - Also, C37.59 was approved with references to low voltage G&T devices, for which there is no standard for new equipment. There is no standard for the device itself, nor is there a standard for the appropriate tests in the switchgear compartment for low voltage switchgear.
 - Mr. Telander feels that medium voltage and low voltage equipment should never be mixed in the same document. He feels that the considerations for the two kinds of equipment are sufficiently different that it adds greatly to complexity.
 - Accordingly, he suggests that consideration be given to moving C37.20.1 from the Switchgear Assemblies subcommittee to the Low Voltage Switchgear Devices subcommittee.
 - This would put all low voltage standards in one subcommittee.
 - Questions were raised about implications for C37.81, C37.82, C37.121, and C37.23. Would these documents also have to be split into medium voltage and low voltage documents?
 - There were several expressions of support for this idea, but no decision at this time. This will be the subject of continuing discussion.
 - Mr. Telander raised the same issues at the meeting of the Low Voltage Switchgear Devices subcommittee.

- Switchgear Main Committee—items to be reported verbally during the main committee meeting were reviewed.
 - A task force for review of the .pdf file for “at risk” documents (C37.20.6, C37.81, C37.82, and C37.121) has been formed to verify the accuracy of the .pdf file.
 - A suggestion that C37.20.1 be transferred to the Low Voltage Switchgear Devices subcommittee was discussed and is under consideration.

- Future Meetings:

Sept. 20-25, 2003	Marriott Portland Downtown 1401 SW Naito Parkway, Portland, OR 97201
Spring, 2004	Galveston, TX

The meeting adjourned at 4:15 PM.

Minutes submitted by: T. W. Olsen
Secretary