

**SWITCHGEAR ASSEMBLIES SUBCOMMITTEE
MINUTES OF THE FALL 2004 MEETING**

WESTIN LA PALOMA, TUCSON, AZ

The meeting was called to order by Chair, D. Lemmerman, at 1:30 PM on Sept. 22, 2004 with the introduction of the following members and guests:

Members:	C. Ball P. Barnhart T. A. Burse E. R. Byron	P. Dwyer D. J. Edwards D. J. Lemmerman F. Mayle	D. Mazumdar T. W. Olsen R. J. Puckett	S. P. Slattery J. E. Smith M. Wactor
Guests:	L Davis N. Gunderson C. Lam	T. McNamara A. Morse N. P. McQuin	E. Sagan C. Schneider A. Storms	P. Sullivan T. Tomes W. Von Miller
Excused:	J. J. Dravis S. S. Gohil R. K. Iyer	J. E. Jerabek W. E. Laubach A. Livshitz	A. Morgan P. Notarian G. R. Nourse	E. A. Peters S. H. Telander
Absent:	G. Sakats			

The minutes of the Spring 2004 Switchgear Assemblies Subcommittee meeting at the San Luis Resort in Galveston, TX were accepted as distributed.

ADSCOM Report

ADSCOM Committee Report: Mr. Lemmerman reported that:

- C37.50 was discussed. This document covers both design and conformance testing for circuit breakers used in metal-enclosed LV power circuit breaker switchgear (C37.20.1), with the suggestion that test requirements be taken over by C37.13. This was discussed in LVSD this morning, and unanimously agreed to leave test requirements in C37.50.
- C37.100.1 – first ballot 69% affirmative. Will issue new ballot (not recirculation) by the end of the year. The default status of C37.100.1 is normative if the clause is referenced in the product standard. The next draft will be posted on the Switchgear Committee website. Goal is to publish by the end of 2005.
- C37.59 will be distributed for working group ballot by the end of the year.
- A working group session on MV GIS (P1663) switchgear application was held this week.
- “MyBallot” was the subject of presentations this week. The new ballot system will be “rolled out” in 2005. The presentation will be posted on the Switchgear Committee website.
- “Notes” are not part of a document. At the first instance of a note, a footnote should be inserted, to read “Notes in text, tables, and figures of a standard are given for information only, and do not contain requirements needed to implement the standard”. This language is derived from the 2005 draft of the Style Manual (not yet released), page 21.
- A draft of suggested format for listing of committee members in standards was discussed and will be discussed again in the main committee meeting. A copy of the draft submitted to AdsCom will be attached to the minutes.
- The status of C37.100 was discussed. We would like to change this to a compilation of definitions, not a “standard”, in the same manner as IEEE 100.

WORKING GROUP REPORTS

The following working group reports were presented:

- C37.20.1a: (Amendment to C37.20.1 - 2002 Standard for Metal-Enclosed Low-Voltage Power Circuit Breaker Switchgear) – T. Burse. The purpose is to amend the document to correct the metrification error in Table 10, and delete references to LV dummy elements. The PAR was considered by NesCom this morning, and NesCom recommended that the full Standards Board approve the project. Many E-Mails have been generated, resulting in a draft of table 10 that has been circulated. A draft on the elimination of dummy elements will be distributed in about 2 weeks.
- C37.20.7: (Guide for Testing Metal-Enclosed Switchgear rated 1kV through 38kV for Internal Arcing Faults): The PAR was approved by IEEE-SA on 25-Mar-2004. D5 was distributed prior to the WG meeting, and comments were reviewed. The present draft incorporates suggested improvements from CSA. Assignments for creation of certain portions of text were made.

A number of requests to extend the scope of the document to include low voltage switchgear were made by interested persons not involved with the working group. A revised PAR extending the scope to include low voltage switchgear was submitted on Tuesday, Sept. 21, for consideration by NesCom, and will be considered during via continuous processing in mid-November. A first pass draft of revisions to incorporate low voltage switchgear has also been created.

The subcommittee discussed at length. A motion was made to affirm the working group's action to expand the scope to no longer exclude low-voltage ac power circuit breaker switchgear from the scope of the document. The motion passed.

- C37.21 (Control Switchboards): The PAR is valid through 31-Dec-2005. The D14 ballot closed 08-Aug-2004 with 93% affirmative. Negative ballots are being resolved, and a recirculation ballot will be initiated in a few weeks. The WG did not meet at this meeting.
- C37.100.1 (Common Clauses): See the AdsCom report.

OLD BUSINESS

- Request for interpretation of existing standard C37.20.1-1993: (D. Lemmerman) A request for interpretation was received from K. Jagannath of Nuclear Power Corporation of India. He asked if C37.20.1 table 4 requires that both conductors in a joint be plated in order to qualify as a joint with "silver surfaced, tin surfaced or equivalent connecting joints". A formal interpretation has been issued.
- Request for interpretation: (D. Lemmerman) Mr. Byron submitted a request for clarification of requirements with respect to minimum steel thickness for MSG No. 11 and MSG No. 14 (trade sizes) of steel. A formal interpretation has been issued.
- C37.24 Dual Logo (IEEE-IEC) status. IEEE-SA submitted C37.24 for dual logo recognition. This has been submitted for action by the IEC Standards Management Board in accordance with document SMB/2873/QP, with

decision on whether to circulate under the fast track procedure (FDIS) due 17-Sept-2004.

- C37.20.2 (Metal-Clad Switchgear) – This was approved in 1999. At the Spring 2004 meeting, the subcommittee authorized a reaffirmation ballot. The reaffirmation process has been started.
- C37.81-1989 (Guide for Seismic Qualification of Class 1E Metal-Enclosed Power Switchgear Assemblies) – D. Lemmerman: Corrections to the IEEE-SA electronic file to conform to the original paper version were completed 25-June-2004. The reaffirmation process has been started.
- MV GIS Application Guide – P1663 (Guide for the Application of Medium Voltage Gas-Insulated Substations 1kV to 52kV) (T. Burse) – The Substation Committee has begun a project (PAR approved 12-August-2004) to create a MV GIS Application Guide. The working group held a meeting here at the Westin La Paloma in Tucson this morning. Copies of the draft are available.
- DC Switchgear – P1653.3 (Standard Wiring Practices and Requirements for Traction Power Metal-Enclosed DC Switchgear) (T. Burse) – The IEEE Traction Power Substation Standards Sub-Committee is working this document, intended to supplement the requirements in C37.20.1. No PAR has been submitted (as of 04-Sept-2004). The WG met June 29-30 in Ottawa and will meet January 25-26 in Houston. Copies of recent meeting notes will be part of the minutes. Those interested in the latest draft can contact T. Burse.
- IEC Activities (SC 17C MT14). T. Burse PES Switchgear Committee liaison representative to SC 17C MT14:
 - IEC 60298 (62271-200) [AC Metal-Enclosed Switchgear and Controlgear for Rated Voltages above 1 kV and up to and Including 52 kV]: No current activity.
 - IEC 60466 (62271-201) [AC Insulation-Enclosed Switchgear and Controlgear for Rated Voltages above 1kV and up to and including 38kV]. It is out in CD form at this time.
 - IEC 61330 (62271-202) [Prefabricated Substations]: The comment period for the CD closed in July. The document includes work on internal arc testing of this equipment.
 - IEC 60932 (62271-304) [Additional Requirements for Enclosed Switchgear and Controlgear from 1 kV to 72.5 kV to be used in Severe Climatic Conditions]: No present activity.
 - IEC 61958 (62271-206) [High-Voltage Prefabricated Switchgear and Controlgear Assemblies – Voltage Presence Indicating Systems]: No present activity.
 - IEC 62271-1 (Common Clauses):
 - It appears that IEC will remove method C, the ANSI/IEEE method, for impulse testing. If so this would overturn historic agreements on harmonization of test methods. If so, we may have to create an in-country clause.
 - The IEC rules on temperature rise allow use of the higher temperature limit when materials with two different temperatures limits are used in bus joints. The US has submitted an objection based on historic US practice.

- ASC C37: All documents remaining under ASC C37 responsibility are current. C37.50 will need reaffirmation prior to start of a revision effort to coordinate with changes to C37.13.
- Future directions for harmonization:
 - IEC is considering creation of requirements for conversions of switchgear. This may be an opportunity to promote harmonization with C37.59.
 - The essential content of C37.85 (vacuum X-Radiation limits) have been incorporated in the latest draft of IEC 62271-1.
- 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.

NEW BUSINESS

- Meeting Rooms- Working group chairs, please submit your WG room requests for the Spring 2005 meeting to Mr. Burse by no later than 01-Feb-2005. 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 asked to provide electronic copies of reports to T. Olsen by the end of the meeting today.
- Switchgear Main Committee—items to be reported verbally during the main committee meeting were reviewed.
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- Future Meetings:

May 8-12, 2005	St. Pete Beach, Tradewinds Island Grand Resort
Oct. 2-6, 2005	Omni Mont-Royal, Montreal, Quebec, Canada

The meeting adjourned at 3:18 PM.

Minutes submitted by: T. W. Olsen
Secretary

Draft of standardized listings of working group, subcommittee, and committee memberships for consideration in all Switchgear Committee standards:

The essential format for the listings of participants to be used for all documents (standards, guides, recommended practices) sponsored by the Switchgear Committee is as follows.

Participants:

This document was prepared by a working group of the (insert s/c name) subcommittee of the IEEE Switchgear Committee. The members of this working group were:

xxx, Chair
xxx, members

When this document was approved, the members of the (insert s/c name) subcommittee were:

xxx, Chair
xxx, Vice-Chair (or secretary, as applicable)
xxx, members

This document was sponsored by the Switchgear Committee of the IEEE Power Engineering Society. When this document was approved, the members of the Switchgear Committee were:

xxx, Chair
xxx, Vice-Chair
xxx, Secretary
xxx, members

The following members of the balloting committee voted on this document. Balloters may have voted for approval, disapproval, or abstention:

list members

When the IEEE-SA Standards Board approved this document on xx-mmmm-200x, it had the following membership:

list members