

**SWITCHGEAR ASSEMBLIES SUBCOMMITTEE  
MINUTES OF THE SPRING 2013 MEETING**

**San Luis Resort, Galveston, TX USA  
May 1, 2013**

The meeting was called to order by Chair, J. Smith, at 1:30 PM on May 1, 2013 with the introduction of the following members and guest:

**Attendance**

Members: Total 33 - 29 present, 4 absent (2 excused) – Quorum was met, 22 Guest

**Members Present (Affiliation):**

C. Ball (S&C)	S. S. Gohil (AZZ/Central El.)	E. Peters (Powell)
P. Barnhart (UL)	D. Hrncir (Eaton)	R. Puckett (Retired)
J. Baskin (Federal Pacific)	A. Jivanani (GE)	C. Schneider (Schneider)
T. A. Burse (Powell)	H. Josten (Siemens)	J. E. Smith (Eaton) - Chair
E. R. Byron (Schneider)	M. Lafond (GE)	H. Song (Bechtel)
J. Earl (ABB)	A. Livshitz (Schneider)	P. Sullivan (Dupont)
D. Edwards (Siemens) - Secretary	F. Mayle (Technibus)	C. Tailor (Eaton)
L. Farr (Eaton)	D. Mazumdar (Central El.)	M. Wactor (Powell)
M. Flack (Southern Co)	T. W. Olsen (Siemens)	R. Warren (KEMA)
K. Flowers (Siemens)	M. Orosz (Schneider)	

**Members Absent (Affiliation):**

D. Lemmerman (PECO/Exelon)*	A. Patel (GE)	* = Excused
A. Morse (Eaton)*	J. Toney (GE)	

**Guests (Affiliation):**

M. Cannady (Southern Co.)	L. Grahor (Eaton)	D. Riffe (Westinghouse)
C. Carne (Schneider)	J. Hanson (Schneider)	A. Rowell (Eaton)
P. DiLillo (ConEd)	T. Hawkins (Siemens)	M. Seabrook (GE)
D. Dunne (Schneider)	A. Jur (Eaton)	J. Shullaw (GE)
D. Elliott (ABB)	C. Kennedy (Eaton)	D. Sigmon (Eaton)
P. Gingrich (AZZ/Central El.)	A. Morgan (Retired)	R. Tanner (Schneider)
D. Giraud (Powell)	D. Moser (ABB)	
P. Glaesman (Reuel)	I. Profir (Rockwell)	

**1. Approval of Meeting Agenda**

Motion to approve agenda by Ted Burse, 2<sup>nd</sup> by Ted Olsen, and approved.

**2. Introduction of members and guests**

Members and guest introduced as recorded above.

**3. Approval of the SA meeting minutes**

Link: <http://www.ewh.ieee.org/soc/pes/switchgear/minutes/f12minutes/F12SAmi.pdf>

Minutes (link above) from the fall 2013 meeting from San Diego, CA were approved.

Motion to approve by Ted Olsen, 2<sup>nd</sup> by Chuck Ball, and approved.

**4. Update Document Status**

D. Edwards: The document status document was distributed to WG Chairs and returned for updates during the meeting. Document status will be published with minutes from this meeting.

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**5. Working Group Status Report**

- a. C37.20.1** – Standard for Metal-Enclosed Low-Voltage Power Circuit Breaker Switchgear  
T. Burse: Minutes are provided.

Initial kick-off meeting was held.

Proposed Scope, as presented at meeting, was revised to add “up to 1000V.”

Divided document in sections and groups formed to address the various sections.

Actions for SA S/C: None

- b. C37.20.2** – Standard for Metal-Clad Switchgear

M. Wactor: Minutes are provided.

Majority of meeting was used to discuss Bob Puckett comments.

Issues are to be discussed in this SA S/C meeting associate with issues that are common to other SA S/C documents.

PAR extension will be requested.

Actions for SA S/C: None

- c. C37.20.3** – Standard for Metal-Enclosed Interrupter Switchgear

C. Ball: Minutes are provided.

WG activity is in reviewing and addressing ballot comments. Issues include:

- Paint and Organic coatings (to be discussed later this SA S/C meeting)
- Coordination with C37.20.2 for these SA S/C Common Clause issues.

Schedule: Goal is to out for recirculation by end of June.

Actions for SA S/C: None

- d. C37.20.4** – Standard for Indoor AC Switches (1kV – 38kV) for Use in Metal-Enclosed Switchgear

C. Ball: No meeting held and thus no minutes provided.

Recirculation ballot was approved and has been submitted for publication. Date for publication is May 13, 2013.

Actions for SA S/C: None

- e. C37.20.7** – Guide for Testing Medium-Voltage Metal-Enclosed Switchgear for Internal Arcing Faults

M. Wactor: Minutes are provided.

This WG is a large group and there was expressed interest in the need for a larger meeting room.

The document revision includes the addition of various types of equipment. Document is separated into various sections with the goal of having a common structure for each of the equipment sections.

1<sup>st</sup> Task Force formed to get all the references and cross-references correct.

2<sup>nd</sup> Task Force formed to review arc initiation wire specifications.

Actions for SA S/C: None

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- f. **C37.20.9 (Std # and PAR are pending)** – Gas Insulated Switchgear Standard 1 kV to 52 kV  
E. R. Bryon: Minutes are provided

Initial meeting held.

This is to be a co-sponsored document with Substation Committee. Substation Committee has expressed issues with PES being primary sponsor and the document number. Decision of which Committee (PES or Substations) will be primary sponsor is targeted for resolution by mid-June 2013. Ted Olsen as Chair of PES Main Committee will work to resolve this issue. If necessary, the escalation would be to Tech Council.

This Task Force reviewed and created a Scope statement in preparation for creating a PAR.

First draft targeted for submittal for review by Mid-August.

Action for S/C: None required

- g. **PC37.23 – Standard for Metal-Enclosed Bus**

A. Jur: Minutes are provided.

Ed Peters resigned as chair of C37.23. Art Jur takes over as chair of C37.23 with Tom Hawkins remaining as vice-chair.

Working group is actively working on:

- Forced Cooling
- Handling Guide
- Cable Bus
- Short Time Test
- Insulation Testing wording from C37.20.2
- Neutral for Impedance grounded systems

New business (topics NOT included in PAR)

- Cast Resin Bus – currently would be accepted as a C37.23 products, and we need to review whether additional requirements are necessary
- 1000V rating coordination with UL 857 – we will work with the UL standards technical panel and NEMA group regarding their desire to move to 1000V.
- Need to understand how we are to handle definitions from .100
- Discussed insulated pipe bus – not to be included in C37.23

Deadline for draft comments: July 1

Actions for SA S/C: None

**6. Old Business**

- a. **IEC activities**

Ted Burse:

Nothing to report

- b. **ASC C37** – General update

T. Olsen:

There are a number of “conformance documents” for which work must be addressed.

- C37.54 and C37.55 when C37.20.2 is completed.
- C37.57 and C37.58 once C37.20.3 and C37.20.4 are completed.

Policies and Procedures documents are to be addressed.

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**c. Task Force Report on Other Enclosure Finishes**

C. Ball:

Basic summary of the history and explanation of changes that were created during the creation of C37.20.3 document associated with finishes was provided (accompanying minutes with SA S/C minutes).

There is informal agreement amongst SA S/C WG's to use common or very similar text in the various documents.

- Motion by Chuck Ball and 2<sup>nd</sup> by E. R. Byron  
Motion: Change title 6.13.1 to be change from "Organic Coating" to "Organic Coating (Organic Paint)" and a definition to be added defining Organic Coating to Section 3.  
Approved
- This text will be provided to other WG's for incorporation into their documents.
- Paul Barnhart to provide definition for "Organic coating" to be added to the text from the extract from C37.20.3.

There was a discussion of creating a new "Switchgear Common Clauses" document which would include issues such as coating, wiring, and flammability.

Motion by Paul Barnhart and 2<sup>nd</sup> by Ted Burse

Motion: Form a Task Group to review the similar clauses of the various SA S/C documents and to make recommendations to SA S/C for establishing a SA Common Clauses document.

Approved

For clarification, targeted areas of interest include:

- Coating
- Insulation
- Wiring

Task Force to review against C37.100.1 and not duplicate items covered.

Task Force members:

P. Barnhart	K. Flowers	A. Rowell
T. Burse (Chair)	A. Jur	C. Schneider
D. Elliott	M. Lafond	M. Seabrook

**7. New Business**

**a. SA Documents Status** – Required action – review of proposed "SA Document Status" report

- i. C37.20.6 GTD – 4.76 kV to 38 kV Rated Grounding and Testing Devices Used in Enclosures  
Motion to create PAR by Ted Olsen with 2<sup>nd</sup> by Chuck Ball. Approved.  
Ted Olsen to chair WG.
- ii. C37.21 – Control Switchboards  
Work postponed for now.

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- iii. C37.24 – Guide for Evaluating the Effect of Solar Radiation on Outdoor Metal-Enclosed Switchgear  
Motion to create PAR by Paul Barnhart with 2nd Ted Olsen. Approved  
Task Force Members  
L. Farr (Chair)                      S. Gogil
  - iv. C37.59 – Requirements for Conversion of Power Switchgear Equipment  
Work postponed for now.
  - v. C37.81 – Seismic Qualification of Class 1E Metal-Enclosed Power Switchgear Assemblies  
Formed a Task Force to review the document and provide list of potential recommendations for change.  
Task Force Member  
J. Earl                                      M. Flack  
D. Riffe (Chair)                      R. Parthasarathi  
C37.81 and C37.82 will be worked on in conjunction each other.
  - vi. C37.82 1E – Qualification of Switchgear Assemblies for Class 1E Applications in Nuclear Power Generating Stations  
C37.81 and C37.82 will be worked on in conjunction each other.
- b. C37.100 – Definition migration** – Ted Olsen  
Ted to provide definitions to SA S/C chair. These definitions must be confirmed as being covered by our appropriate documents. Plan is to include these in new SA S/C Common Clauses document.
- c. Wire type for replacement of SIS wire type requirement** – Paul Barnhart  
Suggest that SIS wire requirements in SA S/C documents be removed. It is recognized that there are other wire types that have sufficient capabilities. Instead, the wire capabilities would be detailed based on performance, capability, and test requirements.  
This issue will be addressed by the SA S/C Common Clauses Task Force.
- d. ADSCOM** – Items for SA S/C chair to discuss at ADSCOM meeting  
J. Smith: None
- e. Main Committee Meeting Items** – Review items to be presented  
J. Smith: None
- f. Meeting Rooms**  
D. Edwards: Request to WG Chairs, advise the Subcommittee Secretary concerning WG meeting room requirements (preferred dates, number of sessions (one session – 1 hr 45 min, number of participants expected, and A/V needs) no later than Friday, May 3, 2013.
- g. Working Group Minutes**  
D. Edwards: Working group chairs should have their minutes emailed to Subcommittee Secretary no later than Friday, May 3, 2013, for publishing on the website.  
Email address: [doug.edwards@ieee.org](mailto:doug.edwards@ieee.org)

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**h. Upcoming Meetings:**

Fall 2013 (16 Sept – 19 Sept), Hilton Palacio Del Rio, San Antonio, TX USA  
Spring 2014 (5 May – 8 May), Disney Contemporary Hotel, Orlando, FL USA  
Fall 2014 (21 Sept – 25 Sept), Renaissance Hotel, Asheville, NC USA  
Spring 2015 (27 Apr – 30 Apr), Tradewinds, St. Pete Beach, FL USA  
Fall 2015 (20 Sept – 24 Sept), Catamaran Resort Hotel, San Diego, CA USA

**8. Adjourn**

Meeting adjourned at 3:25 PM.

Reported by:

Doug Edwards  
Switchgear Assemblies Sub-Committee Secretary  
May 1, 2013