

SWITCHGEAR ASSEMBLIES SUBCOMMITTEE SA S/C
MINUTES OF THE SPRING 2022 MEETING
Hilton Bonnet Creek, Orlando, FL
Wednesday, 1:30-3:15 PM, April 13, 2022

The meeting was called to order by SA S/C Chair, D. Moser, at 1:30 PM on April 13, 2022:

Attendance

- Members: 33 of 53 members present – Quorum was met.
- Guests: 23
- Total: 56

Attendance list is recorded at the end of the meeting minutes.

1. Introduction of Members and Guests

Members and guests introduced as recorded below.

2. Reviewed IEEE Patent, Copyright slides, and reminder against commercial topics

Verbal call for any issues– none identified.

3. Approval of Meeting Agenda

The Spring 2022 agenda was presented for review.

Motion to approve by M. Lafond, Second by Keith Flowers.

Motion approved by unanimous consent.

4. Approval of SA S/C Meeting Minutes

[F21SAmiREV0.pdf \(ieee.org\)](#)

Minutes (link above) from the Fall 2021 meeting were posted on-line.

Motion to approve meeting minutes by Mike Lafond, Second by Ron Hartzel.

Motion approved by unanimous consent.

5. Working Group, Task Force, Study Group & Ad Hoc Status Reports

- a. **C37.20.1** – IEEE Standard for Metal-Enclosed Low-Voltage (1000 Vac and below, 3200 Vdc and below) Power Circuit Breaker Switchgear
Mike Lafond: Meeting minutes are provided. Verbal update of WG activities.

Lashing of cables was discussed. There may be a need to change the PAR to add indication that copyright material may be needed to address cable lashing. Mike Lafond made motion to update the PAR to indicate that copyright material may be needed. Seconded by Paul Barnhart. Approved by unanimous consent.

PAR expires 12-31-2024. Documents posted in iMeet Central.

Actions for SA S/C Chair: No further action required.

- b. **C37.20.1** – Ad Hoc between C37.13 and C37.20.1 focused on temperature limits of circuit breakers inside switchgear enclosures
Keith Flowers: No activity since last meeting.
Actions for SA S/C Chair: No further action required.

- c. **C37.20.1** – Ad Hoc to investigate use of cables for testing
Tom Hawkins: Use of cables for testing has been included with the work by the working group.
Actions for SA S/C Chair: No further action required.

- d. **C37.20.2** – IEEE Standard for Metal-Clad Switchgear:
Michael Wactor: Minutes are provided. Verbal update of WG activities.

Recirculation ballot was completed and the document submitted to REVCOM. After submittal to REVCOM a possible wording issue was discovered concerning interlock. Michael Wactor made motion to request the document back from REVCOM to allow the

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working group to address the possible wording issue. Seconded by Paul Barnhart.
Approved by unanimous consent.

Actions for SA S/C Chair: No further action required.

- e. **C37.20.3** – IEEE Standard for Metal-Enclosed Interrupter Switchgear (1 kV-48.3 kV)
Ron Hartzel: Minutes are provided. Verbal update of WG activities. Document submitted to IEEE for editorial review. Will go to ballot once document is returned from IEEE.
Actions for SA S/C Chair: No further action required.
- f. **C37.20.4** – IEEE Standard for Indoor AC Switches (1 kV-52 kV) for Use in Metal-Enclosed Switchgear
Bob Cohn: Minutes are provided. Verbal update of WG activities. Working to remove references to IEC 62271. Plan to go to ballot this year.
Actions for SA S/C Chair: No further action required.
- g. **C37.20.6** - IEEE Standard for 4.76 kV to 48.3 kV Rated Ground and Test Devices Used in Enclosures
Ron Hartzel: Minutes are provided. Verbal update of WG activities. Acted on approximately half of the comments received. Will hold virtual meeting before the Fall 2022 meeting. Would like to bring content from C37.04 into C37.20.6. Agreement by Switchgear Committee Chair (Keith Flowers) of that plan.
PAR approved on 9-23-2021, expiration date of 12-31-2025.
Actions for SA S/C Chair: No further action required.
- h. **C37.20.7** - IEEE Guide for Testing Switchgear Rated Up to 52 kV for Internal Arcing Faults
Dan Hrcir: Minutes are provided. Verbal update of WG activities. Acted on most of the comments received and reports from several ad hoc groups. Additional ad hoc groups created to address specific topics.
Actions for SA S/C Chair: No further action required.
- i. **C37.20.10** – IEEE Standard for Definitions for AC (52 kV and Below) and DC (3.2 kV and Below) Switchgear Assemblies
Dan Delfino: Minutes are provided. Verbal update of WG activities. PAR was approved On 12/8/2021. Began review of the document. Will create draft document for the Fall 2022 meeting.
Actions for SA S/C Chair: No further action required.
- j. **C37.23** – IEEE Standard for Metal Enclosed Bus
Jared Hines: Minutes are provided. Verbal update of WG activities. Discussed updates to C37.20.2 and C37.20.3 and possible impact on C37.23. Those will be reviewed and incorporated (as needed) into a C37.23 draft for the Fall 2022 meeting. Seismic information for bus was discussed during the meeting. Significantly more information is needed before seismic requirements for bus can be developed. Bus may be installed in many configurations and that makes seismic requirements very complicated.
Actions for SA S/C Chair: No further action required.
- k. **C37.24** – IEEE Guide for Evaluating the Effect of Solar Radiation on Outdoor Metal-Enclosed Switchgear

SASC conducted an online vote on the motion to approve the PAR for C37.24 using the Direct Vote Live System. We opened the ballot on January 10th and closed on January 25th. The results were 16 votes to approve, 1 abstained, 0 votes to disapprove. The motion carries and the PAR can be submitted to NESCOM for approval.

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Terry Woodyard: Minutes are provided. Verbal update of WG activities. Held first meeting this week. Created several ad hoc groups to address specific items. Will hold virtual meetings this summer to prepare for Fall 2022 meeting.
Actions for SA S/C Chair: No further action required.

- I. **C37.122.2** - IEEE Draft Guide for the Application of Gas Insulated Substations 1 kV to 52 kV (This is an ADSCOM document of interest to SA S/C members)
Eldridge Byron: Minutes to be provided to ADSCOM. Verbal update of WG activities. This is a joint sponsorship document with Substations Subcommittee with Substations Subcommittee being the primary sponsor. One ballot completed with 300+ comments, but many comments were from a single balloter and comments were not for C27.122.2. Another ballot planned for around May.
Actions for SA S/C Chair: No further action required.

6. Old Business

a. Report on formalizing liaison with IEC TC17/SC17C

Eldridge Byron: Verbal update of status. No official appointment of a liaison is in place. The work can proceed without a formal appointment.
Actions for SA S/C Chair: No further action required.

b. IEC Activities

Eldridge Byron: Verbal update of IEC activities. Eldridge asked what information Switchgear Assemblies Subcommittee is most interested in. Response was mostly items related to equipment that operates at 52 kV or below.
Actions for SA S/C Chair: No further action required.

c. ACS C37 – General Update

Keith Flowers: Verbal report of ACS C37 activities. Not much activity at this time. Working on new standard for utility metering compartments. Looking for personnel to assist with that document, especially utility personnel. C37.54 still not published. Working to finalize clean-up of the document.
Actions for SA S/C Chair: No further action required.

7. Membership

a. Senior Membership & Award for Young Professionals

Darryl Moser encouraged all non-senior members to obtain senior membership status.
Senior Membership url:
http://www.ieee.org/membership_services/membership/senior/index.html

b. Switchgear Assemblies S/C Membership

Darryl Moser: New SA S/C members will be recognized at the Fall meeting.

c. Main Committee Membership

Darryl Moser: New Main Committee member recommendations will be made by SA S/C to the Main Committee for consideration.

8. New Business

a. Start revisions to / seeking Working Group Chairs:

1. **C37.21** - Standard for Control Switchboards: Christo Thomas volunteered to be chair of C37.21.
2. **C37.81** – Guide for Seismic Qualification of Class 1E Metal-Enclosed Power Switchgear Assemblies
3. **C37.82** – IEEE Standard for the Qualification of Switchgear Assemblies for Class 1E Applications in Nuclear Power Generating Stations

b. SAS/C officer rotation

1. D. Moser: Next officer rotation scheduled for January 1, 2025.

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c. WG / Study Group Chairs – Required information

All 3 of the following need to be sent to the SA Subcommittee Secretary no later than Friday, April 29, 2022. darryl.moser@us.abb.com; CC: paul.b.sullivan@ieee.org

1. **SA Document Status** – Required action – WG – Document Status & Website Synopsis.

2. **WG Meeting Room Requests** – Update “SA Document Status” report

D. Moser: WG, Study Groups and Ad Hoc's - Please confirm meeting room requirements with Paul Sullivan. Meeting room requests are circulated in SA Document status. Be sure that room requests include expected participant size and number of sessions.

3. **Working Group Minutes**

d. ADSCOM – Items for SA S/C Chair to discuss at ADSCOM meeting

Will discuss bringing content from C37.04 into C37.20.6.

e. Main Committee Meeting Items – Review items to be presented

Total: 14 documents

Active PAR's: 9 – C37.20.1, C37.20.2, C37.20.3, C37.20.4, C37.20.6, C37.20.7, C37.20.10, C37.23, C37.24

2022 Ballot Activity: 1 - C37.20.2

Upcoming PAR Activity:

Not Active: 5 - C37.20.9, C37.21, C37.81, C37.82, C37.121

f. Upcoming Meetings

1. Fall 2022: Burlington, VT (October 8-15)

2. Spring 2023: Clearwater, FL

3. Fall 2023: San Diego, CA

4. Spring 2024: St. Petersburg, FL

5. Fall 2024: Phoenix, AZ

6. Spring 2025: Hilton Head, SC

7. Fall 2025: Reno, NV

9. Adjourn

Meeting adjourned at approximately 3:02 PM.

Reported by:

Paul Sullivan

Switchgear Assemblies Subcommittee Secretary

May 19, 2022

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Attendance Record

First Name	Last Name	Company	Role
Chris	Ambrose	Federal Pacific (Div. of Electro-Mechanical Corp.)	Member
Koustubh	Ashtekar	JST Power Equipment	Guest
Paul	Barnhart	Underwriters Laboratories	Member
Robert	Burns	Eaton	Guest
Ted	Burse	Powell Industries, Inc	Member
Eldridge	Byron	Schneider Electric	Member
Robert	Cohn	Powercon Corp.	Member
Fiori	Coziuc		Guest
Randall	Creach	AZZ Switchgear Systems	Member
Daniel	Delfino	ABB	Member
Jeffrey	Door	The H-J Family of Companies	Member
Arkadiusz (Erik)	Doroz	Eaton	Guest
Doug	Edwards	Siemens Industry, Inc.	Member
Sergio	Flores	Schneider Electric Inc. USA	Member
Keith	Flowers	Siemens Industry, Inc.	Member
Christopher	French	Eaton Corporation	Guest
Brian	Gerzeny	Powell Industries	Guest
Paul	Gingrich	AZZ Switchgear Systems	Member
Sahadev	Gohil	AZZ Switchgear Systems	Member
Lou	Grahor	Eaton Corporation	Member
Erin	Hardy	Eaton	Guest
Ronald	Hartzel	Eaton Corporation	Member
Tom	Hawkins	Siemens Industry, Inc.	Member
Jared	Hines	Eaton Corp.	Member
Dan	Hrncir	Eaton	Member
Rahul	Jain	S&C Electric Company	Member
Chad	Kennedy	Schneider Electric	Guest
Michael	Lafond	ABB	Member
J. Dakota	Leopard	Eaton	Guest
Albert	Livshitz	CE Power Engineered Services	Member
Kevin	McGlown	JST Power Equipment	Guest
Ken	McKinney	VL	Guest
Jeff	Mizener	Siemens Industry, Inc.	Member
Darryl	Moser	ABB	Chair
Terry	Neighbours	ABB Inc.	Member
Miklos	Orosz	Myers Controlled Power	Member

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Mary	Owens	Eaton	Guest
Owen	Parks	ABB	Guest
Mark	Pattison	H-J Family of Companies	Guest
Al	Pruitt	The Durham Company	Guest
Bobby	Rich	Dominion Energy	Guest
Jeffery	Ricker	SCHNEIDER ELECTRIC	Guest
Mark	Roberson	AZZ/Calvert	Member
Tim	Rohrer	Exiscan	Guest
Todd	Sauve	Rockwell Automation	Guest
Carl	Schneider	Schneider Electric	Member
Dean	Sigmon	Eaton Corporation	Member
Garett	Sims	Eaton Corp.	Member
Kevin	Sippel	Eaton Electric	Member
Paul	Sullivan	DuPont	Member
Donald	Swing	Powell Industries	Member
Christopher	Thomas	Schneider Electric	Guest
Michael	Wactor	Powell Industries, Inc	Member
Jacob	Walgenbach	Siemens Industry	Guest
Jonathan	Wear	JST Power Equipment	Guest
Terrance	Woodyard	Siemens Industry Inc.	Member