

**SWITCHGEAR ASSEMBLIES SUBCOMMITTEE SA S/C**  
**MINUTES OF THE Spring 2019 MEETING**  
**Hilton Burlington Lake Champlain, Burlington, VT**  
**May 1, 2019**

The meeting was called to order by SA S/C Chair, T. Hawkins, at 1:32 PM on May 1, 2019 with the introduction of members and guests:

**Attendance**

Members: 32 present, 12 absent – Quorum was met.

Guests: 33

Total: 65

Attendance is recorded at the end of the meeting minutes. Membership and attendance is recorded in the AMS system.

**1. Introduction of Members and Guests**

Members and guests introduced as recorded above.

**2. Verbal call for essential patents – none identified**

**3. Approval of Meeting Agenda**

Spring 2019 agenda presented.

Motion by Allan Morse to accept the meeting agenda as presented. Second by Dan Hrnccir

Motion approved by the SA S/C.

**4. Approval of SA Meeting Minutes**

Link: <http://www.ewh.ieee.org/soc/pes/switchgear/minutes/2018-2/F18SAmiREV1.pdf>

Minutes (link above) from the Fall 2018 meeting in Kansas City were posted on-line.

Motion by Bob Cohn to accept these meeting minutes; Second by Mike LaFond

Motion approved by the SA S/C.

**5. Working Group & Ad Hoc Status Reports**

**a. C37.20.9 – Draft Standard for Metal Enclosed Switchgear Rated 1 kV to 52 kV Incorporating Gas Insulation Systems**

E. Byron: Proceeded to RevCom with 1 unresolved negative ballot.

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

**b. C37.121 –Guide for Switchgear - Unit Substations – Requirements**

D. Moser: Minutes are provided.

D. Moser: WG met and resolved comments from the draft document circulated.

Darryl Moser, WG Chair brought motion to proceed to ballot

Motion approved by SA S/C.

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

**c. C37.20.3 –Standard for Metal-Enclosed Interrupter Switchgear (1 kV-38 kV)**

A. Morse: Minutes are provided.

A. Morse: WG met and comments were resolved.

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

**d. C37.20.4 – Ad Hoc for Standard for Indoor AC Switches (1 kV-52 kV) for Use in Metal-Enclosed Switchgear**

B. Cohn: Minutes are provided.

B. Cohn: PAR to be approved soon. Adding partial discharge to the draft document.

Motion by Doug Edwards, second by Paul Barnhart to change 38kV to 52 kV in title in the agenda

Motion approved by SA S/C.

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

**e. C37.20.24 – IEEE Guide for Evaluating the Effect of Solar Radiation on Outdoor Metal-Enclosed Switchgear**

T. Woodyard: No meeting needed or held. Document is to be published this week.

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

- f. **C37.20.1, C37.20.2 & C37.21** – Amendments to incorporate Ad Hoc wiring proposals

D. Hrnrcir: Minutes are provided.

Motion by Dan Hrnrcir, WG Chair, to go to ballot.

Motion approved by SA S/C.

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

- g. **Ad-Hoc** - Air temps surrounding cables in cable compartment

No Ad hoc meeting minutes recorded but a PowerPoint presentation was provided.

Ad Hoc recommendation for C37.20.1, C37.20.2, C37.20.3 & C37.20.9 is to remove the requirement from the standards.

Motion by Paul Barnhart to amendment above standards per Ad-hoc recommendation as the standards come up for revision. Second by Allan Morse.

Motion approved by SA S/C. Ted Burse voted in opposition to the change.

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

- h. **C37.20.2** – PAR Study Group for possibility of addressing:

a. Testing of grounding provisions in switchgear intended for accepting G&T devices

b. Mechanical performance testing as it relates to auxiliary drawout equipment

M Wactor: Study group met and discussed items a. and b. above, they voted to be in favor of beginning the revision process now. PAR was already submitted to and approved by NESCOM while our previous motion was to only form a Study Group

Motion by Mike Wactor to open PAR to revise the document. Second by P. Barnhart.

Motion approved by SA S/C.

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

**6. Old Business**

**a. IEC Activities**

C. Schneider: Verbal report.

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

**b. ACS C37** – General Update

K. Flowers: Verbal report.

C37.50 has been published with errors and will be corrected. C37.51 has published. C37.58 should be published soon. Other C37 documents are in the ballot or final review stages.

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

**7. Membership**

**a. Senior Membership & Award for Young Professionals**

T. Hawkins: John Phouminh, Bob Lau and Mike Orosz were recognized for receiving their senior memberships.

T. Hawkins: Encouraged all non-senior members to obtain senior membership status.

Senior Membership url:

[http://www.ieee.org/membership\\_services/membership/senior/index.html](http://www.ieee.org/membership_services/membership/senior/index.html)

**b. Switchgear Assemblies S/C Membership**

T. Hawkins: Four people will be elevated to SA S/C member status; Terry Neighbours, Kevin Sippel, Ron Hartzel, Jared Hines.

**c. Main Committee Membership**

T. Hawkins: New Main Committee member recommendations have been made by SA S/C to the Main Committee.

**8. New Business**

**a. WG / Study Group Chairs – Required information**

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All 3 of the following to SA Subcommittee Secretary no later than Friday, May 3, 2019. Email address: [darryl.moser@us.abb.com](mailto:darryl.moser@us.abb.com) (CC: [tom.hawkins@ieee.org](mailto:tom.hawkins@ieee.org))

1. **SA Document Status** – Required action – WG – Document Status & Website Synopsis – To SA S/C Secretary no later than May 3, 2019.
2. **WG Meeting Room Requests** – Update “SA Document Status” report  
T. Hawkins: WG, Study Groups and Ad Hocs - Please confirm meeting room requirements with Darryl Moser. Meeting room requests are circulated in SA Document status. Be sure that room requests include expected participant size.
3. **Working Group Minutes** – Submit to SA S/C Secretary no later than Friday, May 3, 2019.

**b. C37.20.7 – Study Group formation**

Motion by Dan Hrcir: Request that a study group be formed to determine if an additional accessibility supplemental rating should be added in Annex C to rate the performance characteristics of switchgear with the circuit breaker compartment door open. Mike LaFond seconded.

Motion approved by SA S/C. Ted Burse, Eldridge Byron, Paul Barnhart and Doug Edwards voted in opposition to the motion.

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

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

T. Hawkins: No further action required.

**d. C84.1 – Voltage tolerances**

K. Flowers: Reported about changes to IEEE 1547 and potential changes to C84.1 regarding voltage tolerances up to 110% of nominal value. Encouraged members to submit comments to NEMA and to register for ballot pool of IEEE1547.1 and ballot their objections. Look under SEC 21 to find the open ballot for IEEE 1547.1. Refer to ADSCOM meeting minutes.

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

Total: 15

Active PAR's: 5 - C37.20.1a, C37.20.2a, C37.21a, C37.20.3, C37.121

2019 Ballot Activity: 4 - C37.20.1a, C37.20.2a, C37.21a, C37.121

Upcoming PAR Activity: 5 - C37.20.1, C37.20.2, C37.20.6, C37.20.7, C37.23

Not Active: 5 - C37.20.9, C37.20.10, C37.24, C37.81, C37.82

**f. Upcoming Meetings**

Fall 2019 (06 Oct – 10 Oct), Catamaran Resort, San Diego, CA

Spring 2020 (04 May – 08 May), Peppermill Resort, Reno, NV

Fall 2020 (04 Oct – 08 Oct), Sheraton Sundance Square, Fort Worth, TX

Spring 2021 (18 April – 23 April), Hilton Charlotte University Place, Charlotte, NC

**9. Adjourn**

Meeting adjourned at 3:04 PM.

Reported by:

Darryl Moser  
Switchgear Assemblies Sub-Committee Secretary  
May 1, 2019

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Attendance record and as recorded in the AMS system:

Role	First Name	Last Name	Company
Chair	Tom	Hawkins	Siemens Industry, Inc.
Secretary	Darryl	Moser	ABB
Guest	Chris	Ambrose	Federal Pacific (Div. of Electro-Mechanical Corp.)
Guest	Brad	Armstrong	Meramec Instrument Transformer Co.
Member	Paul	Barnhart	Underwriters Laboratories
Guest	Francis	Beauchemin	Hydro-Quebec
Guest	Dave	Booth	Exiscan
Member	Russell	Boyce	Eaton
Member	Ted	Burse	Powell Industries, Inc
Member	Eldridge	Byron	Schneider Electric
Guest	Clint	Carne	Schneider Electric
Guest	Michael	Christian	ABB
Member	Robert	Cohn	Powercon Corp.
Guest	Randall	Creach	AZZ Switchgear Systems
Guest	Federico	Di Michele	CESI S.p.A.
Member	David	Dunne	Schneider Electric
Guest	Bernie	Dwyer	PECO
Member	Doug	Edwards	Siemens Industry, Inc.
Member	Michael	Flack	Southern Company Services, Inc.
Member	Sergio	Flores	Schneider Electric Inc. USA
Member	Keith	Flowers	Siemens Industry, Inc.
Guest	Christopher	French	Eaton Corporation
Member	Paul	Gingrich	AZZ Switchgear Systems
Guest	Peter	Glaesman	PCORE Electric Company, Inc.
Member	Sahadev	Gohil	AZZ Switchgear Systems
Member	Lou	Grahor	Eaton Corporation
Guest	Jodi	Haasz	IEEE
Member	Ronald	Hartzel	Eaton Corporation
Member	Jared	Hines	Eaton Corp.
Guest	Jason	Hollander	RESA Power
Member	Dan	Hrcir	Eaton

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Guest	Rahul	Jain	S&C Electric Company
Guest	Ronny	Konrad	Huntsman Advanced Materials
Past Chair	Michael	Lafond	ABB
Guest	James	Lagree	Eaton
Guest	Robert	Lau	nVent Hoffman
Member	Albert	Livshitz	CE Power Engineered Services
Guest	Alex	Lizardo	Cargill
Guest	Benson	Lo	Toronto Hydro
Guest	Douglas	Mason	ComEd
Member	Jeff	Mizener	Siemens Industry, Inc.
Guest	Ashley	Moran	IEEE Standards Association (IEEE-SA)
Member	Charles	Morse	Siemens Industry, Inc.
Member	Terry	Neighbours	ABB Inc.
Member	Miklos	Orosz	Myers Controlled Power
Guest	Owen	Parks	ABB
Guest	Mark	Pattison	H-J Family of Companies
Guest	John	Phouminh	PEPCO HOLDINGS, INC.
Guest	Paul	Rakus	Eaton
Guest	Mark	Roberson	AZZ/Calvert
Member	Richard	Rohr	Powell Electrical Systems
Guest	Tim	Rohrer	Exiscan
Guest	Leonel	Santos	Schneider Electric
Member	Carl	Schneider	Schneider Electric
Member	Dean	Sigmon	Eaton Corporation
Guest	Garett	Sims	Eaton Corp.
Member	Kevin	Sippel	Eaton Electric
Guest	Christopher	Slattery	FirstEnergy
Member	Paul	Sullivan	DuPont
Guest	Donald	Swing	Powell Industries
Member	Chand	Tailor	Eaton Corporation
Guest	Lars	Tuveson	Burns & McDonnell
Member	Michael	Wactor	Powell Industries, Inc
Guest	Torsten	Wirz	ABB AG
Member	Terrance	Woodyard	Siemens Industry Inc.