

**SWITCHGEAR ASSEMBLIES SUBCOMMITTEE SA S/C  
MINUTES OF THE ~~SPRING-FALL~~ 2017 MEETING**

**Marriott Portland Sable Oaks, Portland, ME  
October 11, 2017**

The meeting was called to order by SA S/C Chair, M. Lafond, at 1:31 PM on October 11, 2017 with the introduction of members and guests:

**Attendance**

Members: 31 present, 9 absent – Quorum was met.

Guests: ~~2517~~

Total: ~~5648~~

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. Approval of Meeting Agenda**

Spring 2017 agenda presented.

Agenda accepted without changes by the SA S/C. Motion by Paul Barnhart. 2<sup>nd</sup> by M Wactor. Motion approved by the SA S/C.

**3. Approval of SA Meeting Minutes**

Link: <http://ewh.ieee.org/soc/pes/switchgear/minutes/2017-1/S17SAmiREV1.pdf>

Minutes (link above) from the Spring 2017 meeting in Charlotte, NC were posted on-line.

Motion by Allan Morse to accept the meeting minutes; 2<sup>nd</sup>: Terry Woodyard

Motion approved by the SA S/C.

SA S/C Secretary Email address: [tom.hawkins@ieee.org](mailto:tom.hawkins@ieee.org)

**4. Working Group Status Reports**

**a. C37.20.2 Ad Hoc – Inspection Windows**

P. Barnhart: Presentations/ Meeting minutes provided. Met 10/9. 4 attendees P. Barnhart, T. Woodyard, D. Elliot, M. Wactor, Plus M. Lafond.

Ad Hoc members: Paul Barnhart, Jim Bowen, Carl Schneider, Don Elliott, Sergio Flores, Mike Wactor, Marcelo Valdez, Tim Rohrer and Terry Woodyard.

P. Barnhart: Group wants to ban view windows on internal barriers. But also wants user input.

T Olsen: opening low voltage door to IR scan thru internal window is OK.

Next steps: Ad hoc will have at least one more telecom to finalize wording for proposal for next meeting.

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

**b. C37.20.2 Ad Hoc – Logic Level/Communication Wire**

P. Barnhart: We haven't done anything. No meeting minutes provided.

Ad Hoc members: P. Barnhart, T. Burse, J. Jarque, S. Cohn, R. Boyce, E. Byron, T. Hawkins, J Hines, D Edwards, D Elliott, J Mizener, R. Rohr

P. Barnhart: I will create proposal, circulate to Ad Hoc and teleconference

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

**c. C37.20.2 Ad Hoc – Voltage Dividers**

D. Elliot: Presentations/ Meeting minutes provided.

Webex Aug 24. M Wactor, E Byron, A Morse, N McQuinn

Ad hoc members: D. Elliott, M Wactor, E Byron, A Morse, N McQuinn

Proposal presented.

Next steps: capture upcoming changes. Mark up existing

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

**d. Ad Hoc on Snubber Circuits**

A. Livshitz: No minutes are provided. Verbal report out.

Recommendation: Leave as-is. No need for additional protection needed. Current standards allow both solutions.

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

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

M. Wactor: Minutes are provided.

M. Wactor: WG met Tuesday, Oct 10, Quorum was met.

M. Wactor: Unanimous agreement with comment resolutions. Unanimous agreement to submit to REVCOM in time for December approval.

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

**f. C37.20.9 – Metal Enclosed Switchgear Rated 1 kV to 52 kV Incorporating Gas Insulation Systems**

E. Byron: Minutes are provided.

E. Byron: WG met Wednesday, Oct 11. Quorum was met.

E. Byron: Comment resolution team submitted resolution to all comments back to WG members.

Next Steps: recirculation ballot in next 30 days. Trying to get >94% approval.

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

**C37.82 – Qualifications of Switchgear Assemblies for Class 1E Applications in Nuclear Power Generating Stations**

M. Lafond: Standard approved by board. Awaiting publication.

T. Olsen motion to Disband WG after publication. 2<sup>nd</sup> by D Sigmon.

Actions for SA S/C Chair: No further action at this time.

**5. Old Business**

**a. IEC Activities**

C. Schneider: Verbal report. Summary of activities report provided by T. Burse and will be attached to minutes.

C. Schneider: TC 17 DC switchgear task force. AC Switches. -200 degree of continuity. Talk to Ken Getmann to get involved.

Actions for SA S/C Chair: No further action at this time.

**b. ACS C37 – General Update**

J. Webb: Meeting minutes provided.

M. Lafond: reviewed document status and will be including in minutes.

Actions for SA S/C Chair: No further action at this time.

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- c. Visible Break** – Rode Discussion Group Report  
M. Lafond: No meeting minutes provided. Verbal report.  
  
M. Lafond: Visible Break meeting created a draft definition and will be distributed within 30 days.  
  
Call for teleconference participants. D Edwards, T Woodyard, E Byron, M Wactor, P Barnhart  
  
Actions for SA S/C Chair: No further action at this time.

**6. Membership**

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

M. Lafond: The following SA S/C members have achieved senior membership and are recognized.

John McClelland

M. Lafond: Encouraged all non senior members to obtain senior membership.

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**

M. Lafond: The following guests have become SA S/C members:

Russell Boyce

Steve Cary

Bob Cohn

Don Elliott

Sergio Flores

Lou Grahor

Steve Meiners

Jeff Mizener

Richard Rohr

**c. Main Committee Membership**

M. Lafond: No new Main Committee members from SA S/C.

**7. New Business**

**a. Solicitation of upcoming ~~Task Force~~ Ad Hoc Chairs**

**i. C37.121 – Unit Substations**

Co-Chairs: D. Moser, D Elliott.

Participants: A. Livshitz, C. Schneider, T. Neighbours, C. Taylor, A. Morse, D Edwards

**ii. C37.20.3 – Metal-Enclosed Interrupter Switchgear**

Chair: A. Morse, Vice Chair: R. Hartzel,

Participants: A. Livshitz, D. Mazumdar, C. Schneider, T. Woodyard, S. Reddy, A. Morse, R. Jain, T. Neighbours, M. Wactor, C. Taylor, S. Flores, J. Hines

**iii. C37.20.4 – Indoor AC Medium-Voltage Switches for Use in Metal-Enclosed Switchgear**

Chair: J McClelland, Vice Chair: B. Cohn.

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Participants: T. Woodyard, S. Reddy, A. Peterson, C. Taylor, J. Hines, A. Morse

**b. C37.20.3 – Barrier Discussion**

P Barnhart: presentation. C37.20.3 requirements for isolation. All metal? No less than 14GA. List of 5 questions for the next Ad Hoc on C37.20.3

**c. Generator Circuit Breaker Switchgear Discussion**

R Hartzel: presentation of possible scope infringement

Recommendation: form ADSCOM joint HVCB and SA Ad Hoc.

Discussion:

S. Meiners: on the -013 WG, S. Meiners and M Wactor to write definition of a Generator Breaker Switchgear system. Modify 20.3

E. Byron: request a statement from SA S/C

M. Wactor motion to create Task Force to draft proposal to address this issues regarding -200, 20.2 & 20.3 & Generator Breaker Switchgear by end of 2017. 2<sup>nd</sup> by A Livshitz.

Discussion: will need on-line meeting or vote to get approval of SA S/C. Volunteers: M. Wactor, R. Hartzel, A. Morse, A. Livshitz, E. Byron, C. Taylor

Actions for SA S/C Chair: No further action at this time.

**d. SA Document Status – Required action – review of proposed “SA Document Status” report.**  
M. Lafond: Document status has been reviewed with each WG Chair and Document Status Report is updated.

4 documents due to start in 2020. Want to pull 2 up into 2019.

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

M. Lafond: Please contact Tom Hawkins for any changes for meeting room requirements. Meeting room requests are circulated in SA Document status. Be sure that room requests include expected participant size. For all Ad Hocs; get your room requests in.

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

M. Lafond: C37.75 scope creep.

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

Total: 14

Future PAR Activity: 0

Future TF Activity: 0

Future Ballot Activity: 0

Active PAR's: 2 (C37.20.7, C37.20.9)

Not Active: 12 (C37.20.1, C37.20.2, C37.20.3, C37.20.4, C37.20.6, C37.20.10, C37.21, C37.23, C37.24, C37.81, C37.82, C37.121)

**h. Working Group Minutes – To SA S/C Secretary no later than October 13, 2017.**

Email address: [tom.hawkins@ieee.org](mailto:tom.hawkins@ieee.org) and [mike.lafond@ieee.org](mailto:mike.lafond@ieee.org)

**i. WG - Booklet & Website Synopsis – To SA S/C Secretary no later than April 28, 2017.**

Email address: [tom.hawkins@ieee.org](mailto:tom.hawkins@ieee.org) and [mike.lafond@ieee.org](mailto:mike.lafond@ieee.org)

**j. Upcoming Meetings**

Spring 2018 (22 Apr – 27 Apr), Disney's Contemporary Resort, Lake Buena Vista, FL USA

Fall 2018 (14 Oct – 18 Oct), Kansas City Marriott Downtown, MO

Spring 2019 (28 Apr – 01 May), Hilton, Burlington, VT

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

**8. Adjourn**

Meeting adjourned at 3:10 pm.

Reported by:

Tom Hawkins

Switchgear Assemblies Sub-Committee Secretary

October 11, 2017 Revised April 24, 2018

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Attendance record and as recorded in the AMS system: (entire list replaced, data was erroneously pulled from Spring 2017 meeting)

<b>Role</b>	<b>First Name</b>	<b>Last Name</b>	<b>Company</b>
Guest	Brad	Armstrong	Meramec Instrument Transformer Co.
Guest	Koustubh	Ashtekar	Eaton Corporation
Member	Paul	Barnhart	Underwriters Laboratories
Member	Russell	Boyce	Eaton
Member	Eldridge	Byron	Schneider Electric
Member	Stephen	Cary	GE Energy Management
Guest	Simarjit	Chouhan	Crown Technical Systems
Guest	Michael	Christian	ABB
Member	Robert	Cohn	Powercon Corp.
Guest	Daniel	Delfino	General Electric
Guest	Edgar	Dullni	ABB
Member	David	Dunne	Schneider Electric
Member	Doug	Edwards	Siemens Industry, Inc.
Member	Donald	Elliott	ABB
Guest	Tanner	Esco	Eaton Corporation
Member	Sergio	Flores	Schneider Electric Inc. USA
Member	Keith	Flowers	Siemens Industry, Inc.
Guest	Paul	Fox	Schneider Electric
Member	Paul	Gingrich	AZZ Switchgear Systems
Guest	Douglas	Giraud	Powell Industries
Guest	Peter	Glaesman	PCORE Electric Company, Inc.
Member	Sahadev	Gohil	AZZ Switchgear Systems
Guest	Jeffrey	Golarz	IntelliSAW
Guest	Ronald	Hartzel	Eaton Corporation
Secretary	Tom	Hawkins	Siemens Industry, Inc.
Guest	Jared	Hines	Eaton Corp.
Member	Dan	Hrcir	Eaton
Guest	Rahul	Jain	S&C Electric Company
Guest	Nicholas	Keihn	Schneider Electric
Chair	Michael	Lafond	General Electric
Member	David	Lemmerman	PECO/Exelon
Member	Albert	Livshitz	CE Power Solutions
Guest	Benson	Lo	Toronto Hydro
Member	Deepak	Mazumdar	Consultant
Member	John	McClelland	Technibus
Member	Steven	Meiners	GE
Member	Jeff	Mizener	Siemens Industry, Inc.
Member	Charles	Morse	Siemens Industry, Inc.
Member	Darryl	Moser	ABB
Guest	Terry	Neighbours	ABB Inc.
Member	T	Olsen	Retired, formerly with Siemens Industry, Inc.

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Member	Miklos	Orosz	Schneider Electric
Guest	Mark	Peterson	Xcel Energy
Guest	Samala Santosh	Reddy	Powell Industries
Member	Richard	Rohr	Powell Electrical Systems
Member	Carl	Schneider	Schneider Electric
Member	Dean	Sigmon	Eaton Corporation
Guest	Kevin	Sippel	Eaton Electric
Member	Chand	Tailor	Eaton Corporation
Guest	Jey	Thayalan	Schneider Electric
Guest	Bruce	Venne	Rockwell Automation
Member	Michael	Wactor	Powell Industries, Inc
Guest	Jeff	Ward	Doble Engineering Company
Guest	Jerry	Wen	BC Hydro
Guest	Torsten	Wirz	ABB AG
Member	Terry	Woodyard	Siemens Industry Inc.