

SWITCHGEAR ASSEMBLIES SUBCOMMITTEE SA S/C
MINUTES OF THE FALL 2019 MEETING
Catamaran Resort, San Diego, CA
October 9, 2019

The meeting was called to order by SA S/C Chair, T. Hawkins, at 1:32 PM on October 9, 2019 with the introduction of members and guests:

Attendance

Members: 29 present, 7 absent – Quorum was met.

Guests: 32

Total: 61

Attendance is recorded at the end of the meeting minutes. Membership and attendance are 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

Revised Fall 2019 agenda was presented for review.

Motion by M. Lafond to accept the meeting agenda as presented. Second by D. Hrnair

Motion approved by the SA S/C.

4. Approval of SA Meeting Minutes

Link: <http://www.ewh.ieee.org/soc/pes/switchgear/minutes/2019-1/S19SAmiREV0.pdf>

Minutes (link above) from the Spring 2019 meeting in Burlington, VT were posted on-line.

Motion by A. Morse to accept these meeting minutes; Second by M. Lafond

Motion approved by the SA S/C.

5. Working Group, Task Force, Study 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: Ballot completed, document published.

Motion by E. Byron to disband the working group. Second by T. Burse. Motion approved by SA S/C.

Motion by E. Byron for SA S/C to co-sponsor C37.122.2 with the Substations group being the primary sponsor. T. Burse seconded. Motion was withdrawn by E. Byron and T. Burse.

Actions for SA S/C Chair: Present to ADSCOM and the Main Switchgear Committee

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

D. Moser: Minutes are provided.

D. Moser: WG met to discuss and resolve draft 1.4 comments received.

D. Moser, WG Chair brought motion to modify the PAR to include gas-insulated switchgear equipment up to 52 kV and proceed to ballot once approved with a reformed ballot pool.

Second by D. Edwards. 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 reviewed draft 2, formed two Ad Hoc groups to report back to the WG.

A. Morse is to chair the TF to coordinate the wording between C37.20.2 and C37.20.3

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 was approved in May 2019.

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Motion by B. Cohn, second by A. Morse, to change the scope of the PAR to match the working group minutes as presented in document C37.20.4 Scope Update. Motion approved by SA S/C. E. Byron abstained from the vote.

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
K. Flowers: No meeting held. Document is published. Motion by A. Morse to disband the working group. Second by M. Lafond. Motion approved by SA S/C.
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. Hrncir: Minutes are provided.
Motion by D. Hrncir, WG Chair, to form TF to coordinate the wording between the documents and then go for recirculation ballot. Second not required.
Motion approved by SA S/C.
Actions for SA S/C Chair: No further action required.
- g. **C37.20.2** – IEEE Standard for Metal-Clad Switchgear:
M. Wactor: WG met and discussed a change to the PAR.
Motion by M. Wactor, WG Chair, C37.20.2 WG requests to modify the PAR to raise the maximum voltage to 52 kV. Second by A. Morse. Roll call vote, 15 For, 11 Against
Motion approved by SA S/C.
A. Morse appointed to Chair a Task Force to develop requirements for test specimens for testing bus insulation. M. Wactor is Secretary. Goal is to commonize wording in C37.20.2 and C37.20.3
Actions for SA S/C Chair: No further action required.
- h. **C37.20.7** - PAR Study Group for possibility of adding additional accessibility suffix E
D. Hrncir: Minutes are provided.
Motion by D. Hrncir, PAR Study Group Chair, to have a six-month extension to allow the SG more time to develop the scope for the PAR. M. Lafond second.
Motion approved by SA S/C.
Actions for SA S/C Chair: No further action required.

6. Old Business

a. IEC Activities

E. Byron: Verbal report.

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

b. ACS C37 – General Update

K. Flowers: Verbal report.

C37.50 and C37.51 are now published. C37.54, C37.55, C37.57 C37.58 and C37.85 are in the ballot process.

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

c. C84.1 – Voltage Tolerances

K. Flowers: Verbal report.

They withdrew the change to voltage tolerances.

7. Membership

a. Senior Membership & Award for Young Professionals

T. Hawkins: No new senior members.

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

b. Switchgear Assemblies S/C Membership

T. Hawkins: We will review and make announcements at the spring meeting.

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c. Main Committee Membership

T. Hawkins: New Main Committee member recommendations will be made by SA S/C to the Main Committee in the spring.

8. New Business

- a. Entity PAR discussion:** Recommended practices for Specifications and Test Requests of Insulated Tubular Conductors for Rated Voltages from 6 kV up to and including 35 kV

K. Flowers: China State Grid presentation was projected on the screen and reviewed by the SA S/C.

Motion by D. Edwards, second by D. Hrncir, to not sponsor the document.

Motion approved by SA S/C. P. Barnhart abstained.

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

- b. New IEC Standard Proposal - IEC USNC 17C & C37.23:** Update on IEC standard activities and possibilities of joint development of ME bus standard

T. Burse: AC metal enclosed busbar trunking systems (BTS) potentially has a large amount of overlap with C37.23. USNC will disapprove on the IEC vote.

Motion by M. Lafond, second by M. Wactor, to revise C37.23 with an invitation for IEC 17C participation to help include the IEC busbar trunking systems (BTS) anticipated requirements, with the Switchgear Committee as the sponsor.

Motion approved by SA S/C.

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

- c. Start revisions to / seeking Working Group Chairs:**

a. C37.20.1 - IEEE Standard for Metal-Enclosed Low-Voltage (1000 Vac and below, 3200 Vdc and below) Power Circuit Breaker Switchgear

b. C37.20.6 - IEEE Standard for 4.76 kV to 38 kV Rated Ground and Test Devices Used in Enclosures

c. C37.23 - Standard for Metal-Enclosed Bus

- d. WG / TF / Study Group Chairs – Required information**

All 3 of the following need to be sent to the SA Subcommittee Secretary no later than Friday, October 11, 2019. Email address: darryl.moser@us.abb.com (CC: tom.hawkins@ieee.org)

- 1. SA Document Status** – Required action – WG – Document Status & Website Synopsis – To SA S/C Secretary no later than October 11, 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 and number of sessions.

- 3. Working Group Minutes** – Submit to SA S/C Secretary no later than Friday, October 11, 2019.

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

C37.122.2 Guide for the Application of Gas Insulated Substations 1 kV to 52 kV

SASC would like to co-sponsor this with Substations being the primary sponsor.

C37.20.7 Guide for Testing Switchgear rated up to 52 kV for Internal Arcing Faults

SASC has an active PAR Study Group but it was brought to the Chair’s attention that a past agreement moved this to ADSCOM.

T. Hawkins: No further action required.

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

Total: 14 documents

Active PAR's: 7 - C37.20.1a, C37.20.2a, C37.21a, C37.20.2, C37.20.3, C37.20.4, C37.121

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

Upcoming PAR Activity: 4 - C37.20.1, C37.20.6, C37.20.7, C37.23

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

SA voted to revise C37.23 with an invitation for IEC 17C participation to help include the IEC busbar trunking systems (BTS) anticipated requirements, with the Switchgear Committee as the sponsor.

g. Upcoming Meetings

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 3:24 PM.

Reported by:

Darryl Moser
Switchgear Assemblies Sub-Committee Secretary
October 10, 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
Past Chair	Michael	Lafond	ABB
Member	Paul	Barnhart	Underwriters Laboratories
Member	Russell	Boyce	Eaton
Member	Ted	Burse	Powell Industries, Inc
Member	Eldridge	Byron	Schneider Electric
Member	Robert	Cohn	Powercon Corp.
Member	David	Dunne	Schneider Electric
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.
Member	Paul	Gingrich	AZZ Switchgear Systems
Member	Sahadev	Gohil	AZZ Switchgear Systems
Member	Lou	Grahor	Eaton Corporation
Member	Ronald	Hartzel	Eaton Corporation
Member	Jared	Hines	Eaton Corp.
Member	Dan	Hrcir	Eaton
Member	Jeff	Mizener	Siemens Industry, Inc.
Member	Charles	Morse	Siemens Industry, Inc.
Member	Terry	Neighbours	ABB Inc.
Member	Miklos	Orosz	Myers Controlled Power
Member	Richard	Rohr	Powell Electrical Systems
Member	Dean	Sigmon	Eaton Corporation
Member	Kevin	Sippel	Eaton Electric
Member	Paul	Sullivan	DuPont
Member	Chand	Tailor	Eaton Corporation
Member	Michael	Wactor	Powell Industries, Inc
Guest	Chris	Ambrose	Federal Pacific (Div. of Electro-Mechanical Corp.)
Guest	Shaharyar	Anjum	Kinectrics

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Guest	Brad	Armstrong	Meramec Instrument Transformer Co.
Guest	Francis	Beauchemin	Hydro-Quebec
Guest	Clint	Carne	Schneider Electric
Guest	Matthew	Claxton	Powell Industries
Guest	Justin	Coletta	Powell Industries
Guest	Randall	Creach	AZZ Switchgear Systems
Guest	Daniel	Delfino	General Electric
Guest	Federico	Di Michele	CESI S.p.A.
Guest	Jeffrey	Door	The H-J Family of Companies
Guest	Tanner	Esco	Eaton Corporation
Guest	Christopher	French	Eaton Corporation
Guest	Peter	Glaesman	PCORE Electric Company, Inc.
Guest	Benjamin	Hohnstadt	DTE
Guest	Jason	Hollander	CHA Consulting, Inc.
Guest	Rahul	Jain	S&C Electric Company
Guest	Robert	Lau	nVent Hoffman
Guest	Benedict	Lavrinoff	Kinectrics Inc
Guest	Alex	Lizardo	Cargill
Guest	Ashley	Moran	IEEE Standards Association (IEEE-SA)
Guest	Nikil	Mulakken	Facebook
Guest	John	Phouminh	PEPCO HOLDINGS, INC.
Guest	Al	Pruitt	The Durham Company
Guest	Paul	Rakus	Eaton
Guest	Jeffery	Ricker	SCHNEIDER ELECTRIC
Guest	Mark	Roberson	AZZ/Calvert
Guest	Leonel	Santos	Schneider Electric
Guest	Garett	Sims	Eaton Corp.
Guest	Donald	Swing	Powell Industries
Guest	Lars	Tuveson	Burns & McDonnell
Guest	Michael	Whitney	CSA America