

**SWITCHGEAR ASSEMBLIES SUBCOMMITTEE SA S/C**  
**MINUTES OF THE FALL 2020 MEETING**  
**Online Meeting**  
**April 21, 2021**

The meeting was called to order by SA S/C Chair, T. Hawkins, at 1:30 PM CDT on April 21, 2021:

**Attendance**

Members: 35 present, 7 absent – Quorum was met.

Guests: 37

Total: 72

Attendance is recorded at the end of the meeting minutes. Membership and attendance are recorded in the 123 Signup system.

**1. Introduction of Members and Guests**

Members and guests introduced as recorded above.

**2. Reviewed IEEE Patent and Copyright slides**

Verbal call for any issues– none identified

**3. Approval of Meeting Agenda**

The Spring 2021 agenda was presented for review.

Motion by R. Hartzel, “to accept the revised meeting agenda as presented” Second by M. Lafond

Motion approved by unanimous consent of the SA S/C.

**4. Approval of SA S/C Meeting Minutes**

Link: [F20SAmiREV0.pdf \(ieee.org\)](#)

Minutes (link above) from the Fall 2020 meeting were posted on-line.

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

Motion approved by unanimous consent of the SA S/C.

**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  
M. Lafond: Meeting minutes are provided.  
M. Lafond: Verbal update of WG activities.  
Ad Hoc being formed between C37.13 and C37.20.1 to be focused on temperature limits of circuit breakers inside switchgear enclosures  
Actions for SA S/C Chair: No further action required.
- b. **C37.20.2** – IEEE Standard for Metal-Clad Switchgear:  
M. Wactor: Minutes are provided.  
M. Wactor: Verbal update of WG activities.  
Would like to send draft to SA S/C membership for comments prior to formal ballot.  
Actions for SA S/C Chair: No further action required.
- c. **C37.20.3** – IEEE Standard for Metal-Enclosed Interrupter Switchgear (1 kV-48.3 kV)  
R. Hartzel: Minutes are provided.  
R. Hartzel: Verbal update of WG activities.  
Changed the voltage level of 38 kV up to 48.3 kV  
Rain test requirements  
Voltage dividers section  
Would like to send draft to SA S/C membership for comments prior to formal ballot.  
Actions for SA S/C Chair: No further action required.
- d. **C37.20.4** – IEEE Standard for Indoor AC Switches (1 kV-52 kV) for Use in Metal-Enclosed Switchgear  
B. Cohn: Minutes are provided.  
B. Cohn: Verbal update of WG activities. Added 48.3 kV and 52 kV to tables,

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

- e. **C37.20.6** - IEEE Standard for 4.76 kV to 48.3 kV Rated Ground and Test Devices Used in Enclosures  
R. Hartzel: Verbal report of Study Group activities, voltage level will be raised to 48.3 kV.  
R. Hartzel, WG Chair motioned, "to approve the PAR as presented during the meeting"  
M. Lafond seconded. 33 votes to approve, 0 opposed, motion carries.  
Actions for SA S/C Chair: No further action required.
  
- f. **C37.20.7** – IEEE Guide for Testing Switchgear Rated Up to 52 kV for Internal Arcing Faults – Corrigendum to add the instructions for initiating a two-phase fault  
M. Wactor: No minutes are provided.  
M. Wactor: Verbal update of activities. Corrigendum is done, document has been passed to the WG. M. Wactor makes a motion to disband the WG, D. Hrnrcir seconded, motion carried by unanimous consent.  
Actions for SA S/C Chair: No further action required.
  
- g. **C37.20.7** - IEEE Guide for Testing Switchgear Rated Up to 52 kV for Internal Arcing Faults  
D. Hrnrcir: Minutes are provided.  
D. Hrnrcir: Verbal update of WG activities.  
Preparing draft 2 to circulate to WG members before the fall meeting.  
SA website has two C37.20.7 meeting minutes posted and one is actually for C37.23 minutes.  
Actions for SA S/C Chair: Correct the minutes error posted to website.
  
- h. **C37.23** – IEEE Standard for Metal Enclosed Bus  
J. Hines: Minutes are provided.  
J. Hines: Verbal update of WG activities. They have formed two Ad Hoc Groups - Cable bus and Arc-Resistant bus.  
Actions for SA S/C Chair: No further action required.
  
- i. **C37.121** –Guide for Switchgear - Unit Substations – Requirements  
D. Moser: No WG meeting was held, C37.121-2020 was published on March 9, 2021.  
D. Moser, WG Chair brings a motion to disband the WG. M. Lafond seconded the motion, motion carried by unanimous consent.  
Actions for SA S/C Chair: No further action required.
  
- j. **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)  
E. Byron: Minutes to be provided to ADSCOM.  
E. Byron: Verbal update of WG activities.  
Actions for SA S/C Chair: No further action required.
  
- k. **Utility Metering Compartment Ad Hoc**  
K. Flowers: Verbal update of activities, NEMA has withdrawn their request for IEEE to work on this activity and they will work on it within NEMA. B. Marchioni of NEMA will be leading this activity.  
  
If interested in this activity, please contact Brian at [Brian.Marchionini@nema.org](mailto:Brian.Marchionini@nema.org)  
  
Actions for SA S/C Chair: No further action required.

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**6. Old Business**

**a. IEC Activities**

E. Byron & C. Schneider: Verbal update of IEC activities.  
Actions for SA S/C Chair: No further action required.

**b. ACS C37 – General Update**

K. Flowers: Verbal report of ACS C37 activities.  
Actions for SA S/C Chair: No further action required.

**c. Ad Hocs affecting C37.20.1, C37.20.2 and C37.20.3** - WG Chairs were reminded of the findings of Ad Hoc groups for; “air surrounding cables”, “viewing windows” and “voltage dividers” to incorporate into the draft standards.

**7. Membership**

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

T. Hawkins: D. Delfino is recognized as a new senior member.  
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: Subcommittee membership will be updated at the Fall meeting.

**c. Main Committee Membership**

T. Hawkins: 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. **C37.20.10** - IEEE Standard for Definitions for AC (52 kV and Below) and DC (3.2 kV and Below) Switchgear Assemblies – D. Delfino volunteers to serve as Chair, he will pick someone to serve as Secretary, he can now start activity as a PAR Study Group
2. **C37.24** – IEEE Guide for Evaluating the Effect of Solar Radiation on Outdoor Metal-Enclosed Switchgear - T. Woodyard to serve as Chair, T. Neighbours volunteers to serve as Secretary, they can now start activity as a PAR Study Group
3. **JIP33** – Oil & Gas Consortium requests involvement from Switchgear Assemblies members in their specification development, the Powerpoint presentation they provided will be attached for record
4. **Temperature sensing** – online continuous thermal monitoring M. Wactor to serve as liaison between Switchgear Committee and PCIC group. The intent is for this to be a joint development document with PCIC as the Sponsor. The document number is P2969
5. **Technology & Innovation Committee** - call for participation in technical papers
  - a. Testing for Power Frequency Over-Voltages  $\geq 200\%$  open gap
  - b. Aging Switchgear: condition assessment and lifecycle management
  - c. T&D switchgear special applications

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

All 3 of the following need to be sent to the SA Subcommittee Secretary no later than Friday, May 7, 2021. [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 .

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**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 .**

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

No requests for ADSCOM

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

Total: 14 documents

Active PAR's: 6 – C37.20.1, C37.20.2, C37.20.3, C37.20.4, C37.20.7, C37.23

2021 Ballot Activity: 2 possible in the fall - C37.20.2, C37.20.3

Upcoming PAR Activity: 3 - C37.20.6, C37.20.10, C37.24

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

**e. Upcoming Meetings**

Fall 2021 (10 Oct – 14 Oct), Peppermill Resort, Reno, NV

Spring 2022, TBD (In negotiation)

Fall 2022, TBD (in negotiation)

Spring 2023, TBD (In negotiation)

Fall 2023, (08 Oct – 13 Oct), Catamaran Resort, San Diego, CA

**9. Adjourn**

Meeting adjourned at 2:57 PM CDT.

Reported by:

Darryl Moser

Switchgear Assemblies Subcommittee Secretary

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Attendance record: Note unregistered guests could not be recorded in the 123 Signup system

	Role	First Name	Last Name	Company	4/21/2021
1	Chair	Tom	Hawkins	Siemens Industry, Inc.	X
2	Secretary	Darryl	Moser	ABB	X
3	Member	Chris	Ambrose	Federal Pacific (Div. of Electro-Mechanical Corp.)	X
4	Member	Paul	Barnhart	Underwriters Laboratories	X
5	Member	Russell	Boyce	Eaton	X
6	Member	Ted	Burse	Powell Industries, Inc	X
7	Member	Eldridge	Byron	Schneider Electric	X
8	Member	Clint	Carne	Schneider Electric	X
9	Member	Robert	Cohn	Powercon Corp.	X
10	Member	Randall	Creach	AZZ Switchgear Systems	X
11	Member	Daniel	Delfino	ABB	X
12	Member	Jeffrey	Door	The H-J Family of Companies	X
13	Member	Doug	Edwards	Siemens Industry, Inc.	X
14	Member	Sergio	Flores	Schneider Electric Inc. USA	X
15	Member	Keith	Flowers	Siemens Industry, Inc.	X
16	Member	Paul	Gingrich	AZZ Switchgear Systems	X
17	Member	Sahadev	Gohil	AZZ Switchgear Systems	X
18	Member	Lou	Grahor	Eaton Corporation	X
19	Member	Ronald	Hartzel	Eaton Corporation	X
20	Member	Jared	Hines	Eaton Corp.	X
21	Member	Dan	Hrcir	Eaton	X
22	Member	Rahul	Jain	S&C Electric Company	X
23	Member	Michael	Lafond	ABB	X
24	Member	Albert	Livshitz	CE Power Engineered Services	X
25	Member	Jeff	Mizener	Siemens Industry, Inc.	X
26	Member	Terry	Neighbours	ABB Inc.	X
27	Member	Richard	Rohr	Powell Electrical Systems	X
28	Member	Carl	Schneider	Schneider Electric	X
29	Member	Dean	Sigmon	Eaton Corporation	X
30	Member	Garett	Sims	Eaton Corp.	X
31	Member	Kevin	Sippel	Eaton Electric	X
32	Member	Donald	Swing	Powell Industries	X
33	Member	Chand	Taylor	Eaton Corporation	X
34	Member	Michael	Wactor	Powell Industries, Inc	X
35	Member	Terrance	Woodyard	Siemens Industry Inc.	X
36	Guest	Robert	Behl	ABB	X
37	Guest	David	Beseda	S&C Electric Co.	X

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38	Guest	Michael	Christian	ABB	X
39	Guest	Matthew	Claxton	Powell Industries	X
40	Guest	Justin	Coletta	Powell Industries	X
41	Guest	Federico	Di Michele	CESI S.p.A.	X
42	Guest	Edgar	Dullni	retired	X
43	Guest	Claude	Florvil	PSEG	X
44	Guest	Christopher	French	Eaton Corporation	X
45	Guest	Jose	Gamboa	The H-J Family of Companies	X
46	Guest	Chad	Kennedy	Schneider Electric	X
47	Guest	James	Lagree	Eaton	X
48	Guest	Robert	Lau	nVent Hoffman	X
49	Guest	Art	Leifson	ABB	X
50	Guest	David	Lemmerman	PECO/Exelon	X
51	Guest	Alex	Lizardo	Cargill	X
52	Guest	Steven	May	Southern Company	X
53	Guest	Henning	Milnikel	Siemens	X
54	Guest	Ashley	Moran	IEEE Standards Association (IEEE-SA)	X
55	Guest	Owen	Parks	ABB	X
56	Guest	Pathik	Patel	Duke Energy	X
57	Guest	Mark	Pattison	H-J Family of Companies	X
58	Guest	Mark	Peterson	Xcel Energy	X
59	Guest	John	Phouminh	PEPCO HOLDINGS, INC.	X
60	Guest	Paul	Rakus	Eaton	X
61	Guest	Jeffery	Ricker	SCHNEIDER ELECTRIC	X
62	Guest	Ian	Rokser	Eaton Corp	X
63	Guest	Leonel	Santos	Schneider Electric	X
64	Guest	Todd	Sauve	Rockwell Automation	X
65	Guest	Christopher	Slattery	FirstEnergy	X
66	Guest	Jon	Spencer	Utility Solutions	X
67	Guest	Jerry	Wen	BC Hydro	X
68	Guest	Matt	Westerdale	Bureau of Reclamation	X
69	Guest	Mina	Youssef	Eaton Corporation	X
	Unregistered				
70	Guest	Christo	Thomas	Schneider Electric	X
	Unregistered				
71	Guest	Matthew	Sienna	Not found in 123 Signup System	X
	Unregistered				
72	Guest	Noel	Smith	Not found in 123 Signup System	X