

IEEE Power and Energy Society
Switchgear Committee
C37.20.2 Working Group Minutes
Fall 2019 - San Diego, CA
October 7, 2019

1. The meeting was called to order by chair Michael Wactor at 1:30 pm Pacific Time in the Cockatoo Room at the Catamaran Resort in San Diego, CA.
2. The agenda was approved by common consent.
3. Introductions were made by each C37.20.2 member and guest. There were 23 members and 39 guests in attendance (see below). A quorum was present.
4. The IEEE-SA patent policy was reviewed and acknowledged during the meeting. No claims or issues were raised at the C37.20.2 Working Group meeting.
5. The chair advised that there is a new IEEE-SA Copyright Policy and that the working group is following the new policy to the best of our ability.
6. The minutes from the July working group teleconference were reviewed and a motion was made by Michael Lafond and seconded by Paul Barnhart to approve the minutes as presented. The motion carried.
7. The working group reviewed draft D5 of the document which includes the common control wiring language from C37.20.2a as well as resolution to comments submitted to the previous draft. The following are specific items discussed:
 - a. Clause 1.1 – consensus of the working group is that maximum voltage should be increased to 52 kV. Also, it was also suggested that the phrase “where air at ambient pressure is the primary insulating medium” be added to the first sentence, similar to C37.20.3.
 - b. Clause 2 – IEEE 693 was added to the normative references.
 - c. Clause 3 – It was decided that lines 486 – 490 containing the previous definition language with the daggers and asterisks should be removed as should the reference to C37.100. All asterisks and daggers will be removed from individual definitions.
 - d. It was suggested that the SA Subcommittee officially either withdraw or convert C37.100 to inactive reserve status.
 - e. Clause 4d – pollution level 1 needs to be changed to site pollution severity class.
 - f. Clause 5.2.3 – Table 1 – 48 kV and 52 kV lines need to be added to the table from C37.20.9. Also, in the paragraph following Table 1, the words “8.25 kV or 15 kV class” need to be added before generator circuit breakers as in C37.20.3.
 - g. Clause 5.6.3 – this clause needs to revert to the 55 C class for CTs as the ambient cannot be less than the ambient for the switchgear.

- h. Clause 5.9 – include the new language from clause 5.8 in C37.20.3.
 - i. Clause 6.2 – Table 5 – it was suggested that O be used for optional. An Ad Hoc consisting of Michael Wactor, Ted Burse, Paul Barnhart, Terry Woodyard, and Michael Lafond was established to review Table 5 to clarify all test arrangements and the tests to be conducted on each one.
 - j. Clause 6.2.1 – incorporate comments submitted by Chand Tailor.
 - k. Clause 6.2.2.8 - Table 7 – it was suggested that cables should be added for 2000 A, 3000 A, and 4000 A as is being done in C37.20.3. Also, the table footnote regarding equivalent alternate cable sizes from C37.20.3 should be added. An Ad Hoc consisting of Paul Barnhart, Terry Woodyard, Paul Gingrich, Michael Lafond, Dan Hrcir, Michael Wactor, Ron Hartzel, Sergio Flores, and Bob Cohn was established to review and update Table 7.
 - l. Clause 6.2.5a – Change “as” to “of those” before specified. Clause 6.2.5b should have maximum peak current associated with the short time rating of the switchgear. Michael Wactor and Ted Burse will revise clause 6.2.5 to eliminate testing with fuses.
 - m. A definition is needed for auxiliary device.
 - n. Clause 6.2.6 – Tilt-out and manually operated need to be added. An informative note similar to that in C37.20.1 was suggested. It was also suggested that a change in resistance criteria is needed
 - o. Clause 6.2.7 – It was suggested that criteria for the sample (bus bar size, number of bends, etc.) is needed for the applied insulation testing. As this is common with C37.20.3, this item will be referred to the Switchgear Assemblies Subcommittee for their direction.
 - p. Clause 6.2.7.3 – the chair requested that comments be submitted to him on the language in this clause regarding operating sequences for thermal cycling.
 - q. Clause 7.7 – The consensus was to leave this clause as is as it does not prevent installing low-voltage devices between circuit breaker and circuit breaker compartment door or devices on the door.
 - r. Clause 7.21 – Suggestion was to strike the parenthetical.
 - s. There was a discussion regarding temporary protective grounds and the consensus was that this topic is adequately addressed in other standards.
 - t. Clause D.3 – item h from C37.20.3 needs to be added to C37.20.2.
8. Ad hocs are to meet and send their recommendations to the chair and secretary by January 10, 2020. The chair will update draft D5 of the standard with the changes discussed in this meeting and the reports from the ad hocs and it will be emailed to the working group along with a comment sheet. An interim teleconference will then be scheduled in the first quarter to allow another round of comments prior to the Spring meeting, May 4 – 8 at the Peppermill Resort, Reno, NV.
9. A motion to adjourn was made by Ted Burse, seconded by Ron Hartzel. The motion carried unanimously, and the meeting was adjourned by the chair at 5:25 pm.

Report submitted by:

Michael Wactor, Working Group Chair
Allan Morse, Working Group Secretary

Attendees

First Name	Last Name	Company	Role
Chris	Ambrose	Federal Pacific (Div. of Electro-Mechanical Corp.)	Member
Shaharyar	Anjum	Kinectrics	Guest
Paul	Barnhart	Underwriters Laboratories	Member
Francis	Beauchemin	Hydro-Quebec	Member
Russell	Boyce	Eaton	Member
Ted	Burse	Powell Industries, Inc	Member
Eldridge	Byron	Schneider Electric	Member
Mohit	Chhabra	S&C Electric Company	Guest
Robert	Cohn	Powercon Corp.	Guest
Randall	Creach	AZZ Switchgear Systems	Member
Federico	Di Michele	CESI S.p.A.	Guest
Jeffrey	Door	The H-J Family of Companies	Member
Doug	Edwards	Siemens Industry, Inc.	Guest
Nadia	El khattabi	Hydro-Quebec	Guest
Tanner	Esco	Eaton Corporation	Guest
Howard	Fennell	Nashville Electric Service	Guest
Michael	Flack	Southern Company Services, Inc.	Member
Sergio	Flores	Schneider Electric Inc. USA	Member
Jose	Gamboa	The H-J Family of Companies	Guest
Paul	Gingrich	AZZ Switchgear Systems	Member
Sahadev	Gohil	AZZ Switchgear Systems	Member
Paul	Grein	Circuit Breaker Sales, Co, Inc, - GroupCBS	Guest
Ronald	Hartzel	Eaton Corporation	Guest
Tom	Hawkins	Siemens Industry, Inc.	Guest
Jason	Hollander	CHA Consulting, Inc.	Guest
Dan	Hrncir	Eaton	Guest
Monique	La Terreur	STACE	Guest
Michael	Lafond	ABB	Member
Benedict	Lavrinoff	Kinectrics Inc	Guest

Alex	Lizardo	Cargill	Member
Shahab	Mehraeen	Louisiana State University	Guest
Ashley	Moran	IEEE Standards Association (IEEE-SA)	Guest
Allan	Morse	Siemens Industry, Inc.	Secretary
Nikil	Mulakken	Facebook	Guest
Terry	Neighbours	ABB Inc.	Member
Charles	Nybeck	Megger	Guest
Miklos	Orosz	Myers Controlled Power	Member
Mary	Owens	Eaton	Guest
Sean	Parsi	Dexotech	Guest
Damian	Perrin	Entergy Services, LLC	Guest
John	Phouminh	PEPCO HOLDINGS, INC.	Member
Al	Pruitt	The Durham Company	Guest
Roman	Reyes	Bechtel	Guest
Jeffery	Ricker	SCHNEIDER ELECTRIC	Guest
Mark	Roberson	AZZ/Calvert	Guest
Kevin	Rogers	University of Wisconsin	Guest
Richard	Rohr	Powell Electrical Systems	Guest
Leonel	Santos	Schneider Electric	Guest
Dean	Sigmon	Eaton Corporation	Guest
Garett	Sims	Eaton Corp.	Guest
Christopher	Slattery	FirstEnergy	Guest
Don	Steigerwalt	Duke Energy	Guest
Paul	Sullivan	DuPont	Member
Donald	Swing	Powell Industries	Member
Chand	Tailor	Eaton Corporation	Member
Michael	Wactor	Powell Industries, Inc	Chair
John	Webb	ABB	Guest
Michael	Whitney	CSA America	Guest
William	Wilkie	Eaton	Guest
Terrance	Woodyard	Siemens Industry Inc.	Member
Mina	Youssef	Eaton Corporation	Guest
Sandeep	Zope	Amazon Web Services (AWS)	Guest

