

**C37.20.7 Working Group
Meeting Minutes
Online Meeting
October 7, 2020**

1. Call to Order

The meeting was called to order by Dan Hrnair, Working Group Chair at 8 am Central Time.

2. Introductions

Introductions were made by each person in attendance.

3. Meeting Agenda

The meeting agenda was reviewed and approved by unanimous consent

4. IEEE-SA Patent Policy and Copyright Policy

The IEEE-SA Patent Policy and Copyright Policy were discussed.

5. Attendance

51 people attended the meeting. The attendees are listed at the end of this document. 50 attendees requested to become a member of the working group.

6. Discussion Items

- a. The PAR for a revision of C37.20.7 has been approved. This is the first meeting of the Working Group. All personnel wishing to be a member of the Working Group were asked to express that interest in the meeting chat window.
- b. The C37.20.7 corrigendum will be included in this revision.
- c. The existing document was reviewed and potential changes were discussed.
 - a. Definition of "normal operation".
 - b. Reference to C37.04.
 - i. Task Group created to review the reference to C37.04 to see what change may need to be made. Task Group members are:
 1. Terry Woodyard – Chair
 2. Paul Barnhart
 3. Andrew Peterson
 4. Michael Wactor
- c. Addition of possible Suffix E ratings.
- d. Section 5.3.6.4 – Current Limiting Devices
 - i. Address what happens if device does not work?
 - ii. Is that a double fault – arcing fault and device failure?
- e. Criteria 1
 - i. Issue where equipment under test bowed enough to hit indicator stand but did not burn indicators. Only 3" from equipment to frame. That is closer than IEC test.
- f. Section 5.5.3
 - i. Not much details concerning how to secure indicator test stand.
 - ii. Some test stands move during test but not due to being struck by equipment.
 - iii. Consider adding more details on securing of test stand.
 - iv. Current rule states to "restrict" movement, not "prevent" movement. One testing lab will not bolt indicator stands to the floor.
- g. Indicator Placement
 - i. A question was raised to location of indicators when testing is performed with equipment doors open.
- h. Corrigendum

**C37.20.7 Working Group
Meeting Minutes
Online Meeting
October 7, 2020**

- i. A more detailed test procedure is proposed than what is in the current corrigendum. Michael Wactor will share a proposal.
- i. Indicator Cloth
 - i. Several concerns raised about the indicator cloth and how you confirm it can burn.
 - ii. Perhaps require a burn test of the cloth before performing equipment testing.
- j. Passive and Active Systems
 - i. Active systems typically have monitoring systems to help monitor health of the system. May want to add requirements in C37.20.7.
 - ii. Ted Burse referenced IEC Technical Specification 63107 Edition 1, Integration of internal arc-fault mitigation systems in power switchgear and controlgear assemblies (PSC - Assemblies) according to IEC 61439-2, which may have details to consider.
 - iii. Paul Barnhart referenced UL 2748, Standard for Arcing Fault Quenching Equipment, which may have details to consider.
- k. Section 5.3.1 Item b
 - i. Consider additional options for where the prospective test current calibration can be performed.
 - ii. The existing challenge as written is if the circuit has components that would intentionally add impedance and for pressurized systems.
- l. Informative Annex
 - i. Test plan for determining the safe zone for end of plenum area. Possible concern about personnel working near the end of the plenum.
 - ii. Could be difficult to address due to different designs.
 - iii. Garrett Sims agreed to lead a group to discuss this. No group was formed during the meeting.
- m. Section 5.3.2 Supply Circuit Neutral Grounding
 - i. Standard requires the lab system neutral to be connected to the ground bus.
 - ii. Annex B has different grounding requirements/options. Is Annex B less restrictive?
 - iii. Michael Wactor provide some background.
 - 1. A test lab in Europe did testing years ago using different grounding methods.
 - 2. Current standard states either ground and test the system as the equipment intended to be grounded and only use it that way or test with solidly grounded and apply as needed.
- n. Criteria 1 – Owen Parks
 - i. How to address situation where the equipment is mounted closer to the wall than tested. How do back to back section with possible wrap around end?
 - ii. Can you claim Type 2 if not tested against a wall? What about an electrical house?
- o. SF6 Alternative Gas – Li Yu
 - i. Testing is performed using air instead of SF6 gas during testing of SF6 gas insulated equipment due to hazards of SF6.
 - ii. Do we need to use air to replace alternative SF6 gases or use something other than air?
 - iii. Michael Wactor provided some background.
 - 1. CIGRE wrote a paper evaluating SF6 vs air in the same fault conditions. Results showed air produced larger blast/failure.
 - 2. Best method is to use the intended gas if possible (taking all concerns into account).

7. Next Steps

**C37.20.7 Working Group
Meeting Minutes
Online Meeting
October 7, 2020**

- a. Dan Hrcir will send draft 1 of C37.20.7 and a C37.20.7 comment spreadsheet to Working Group.
- b. Working Group members to review C37.20.7 and provide comments using comment spreadsheet. Return comment sheets to Dan Hrcir.
- c. Next meeting will be in Spring 2021 with expectation to begin review of submitted comments.

8. Adjourn

The meeting was adjourned at 10:55 am Central by Dan Hrcir.

Minutes Submitted By: Paul Sullivan, C37.20.7 Working Group Secretary

**C37.20.7 Working Group
Meeting Minutes
Online Meeting
October 7, 2020**

Role	First Name	Last Name	Company
Chair	Dan	Hrncir	Eaton
Secretary	Paul	Sullivan	DuPont
Member	Paul	Barnhart	Underwriters Laboratories
Member	Francis	Beauchemin	Hydro-Quebec
Member	David	Beseda	S&C Electric Co.
Member	Russell	Boyce	Eaton
Member	Ted	Burse	Powell Industries, Inc
Member	Dan	Busilan	Dominion Energy
Member	Eldridge	Byron	Schneider Electric
Member	Clint	Carne	Schneider Electric
Member	Matthew	Claxton	Powell Industries
Member	Robert	Cohn	Powercon Corp.
Member	Randall	Creach	AZZ Switchgear Systems
Member	Federico	Di Michele	CESI S.p.A.
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	Christopher	French	Eaton Corporation
Member	Sahadev	Gohil	AZZ Switchgear Systems
Member	Lou	Grahor	Eaton Corporation
Member	John	Harley	FirstPower Group LLC
Member	Ronald	Hartzel	Eaton Corporation
Member	Jared	Hines	Eaton Corp.
Member	Jason	Hollander	CHA Consulting, Inc.
Member	John	Kaminski	Siemens
Member	Chad	Kennedy	Schneider Electric
Member	Monique	La Terreur	STACE
Member	Michael	Lafond	ABB
Member	Darryl	Moser	ABB
Member	Terry	Neighbours	ABB Inc.
Member	Owen	Parks	ABB
Member	Andrew	Peterson	ABB
Member	Paul	Rakus	Eaton
Member	Anthony	Ricciuti	Eaton Corporation
Member	Jeffery	Ricker	SCHNEIDER ELECTRIC
Member	Mark	Roberson	AZZ/Calvert
Member	Leonel	Santos	Schneider Electric

**C37.20.7 Working Group
Meeting Minutes
Online Meeting
October 7, 2020**

Role	First Name	Last Name	Company
Member	Garett	Sims	Eaton Corp.
Member	Kevin	Sippel	Eaton Electric
Member	Donald	Swing	Powell Industries
Member	Chand	Tailor	Eaton Corporation
Guest	Francois	Trichon	Schneider Electric
Member	Marcelo	Valdes	ABB
Member	Michael	Wactor	Powell Industries, Inc
Member	William	Weishuhn	ABB
Member	Matt	Westerdale	Bureau of Reclamation
Member	Torsten	Wirz	ABB AG
Member	Terrance	Woodyard	Siemens Industry Inc.
Member	Mina	Youssef	Eaton Corporation