RODE C37.60 Reclosers Working Group
Meeting Minutes
February 28, 2024 – Virtual

Chair: Ian Rokser
Secretary: Federico Di Michele

Meeting Agenda

1. Call to Order

The meeting will be called to order.
Meeting started at 09:02.
Harm Bannink commented that links to imeet Central in Agenda were not working. We will double check for next documents.

2. Call for Patents/Copyrights

IEEE Patent and Copyright slides will be shown.
Chair showed corresponding slides and no comments have been received.

3. Introduction of Guests

Self-introductions with affiliations. Additionally, it is mandatory to write name/surname/affiliation in the Teams chat.
Members and guests introduced themselves on the Teams chat.

4. Review of minutes of last meeting

January 2024, Milano meeting
Minutes has been approved with following comment:

- Item 49 (manual lever), Chris Ekpoudom volunteered for this topic too, but his name is missing.

Additionally, Sergey Rogozhkin commented that some IEEE imeet central tasks could be missing.
Revised minutes will be shared with the members and secretary will double check again that all tasks are present to imeet central.

5. Current status & project plan

Updating regarding activities status and future steps.
Chair presented a slide showing the timesheet of the project, explaining that we will do an internal ballot (not official) of 30 days to get first comments. A dedicated comment resolution group will act before to address all comments to the WG.
PAR will end on Dec 31 2027.

6. Draft development

Actions:

- Index 63 (https://ieee-sa.imeetcentral.com/c37-60/folder/WzIwLDE3OTkwODQwXQ):
  STL guide review for earthing of both source & load for T20 operations (Ian Rokser)
  7.103.1.3 has a requirement that both source and load neutrals shall be earthed for a percentage of T20 operations.
  Historically:
    - 1981: When 3 Phase tests were made and intended application on multi-grounded wye systems, ¼ to be grounded. (Repeated in 2005).
    - 2012: the language about intended applications, but the subclause title changed to call out multi-grounded wye systems.

  7.103.2 the TRV peak for kpp-1,0 for three phases tests is to be reduced. This indicates stresses are different in this application.
  Given the discussion in Milan that "triple single" devices must be tested single-phase, therefore, the double grounded T20 test condition would not apply to "triple single" reclosers.
  STL has a guide which clarifies that the need to test multi-grounded system is regardless of the kpp.
    - There may be a need to allow test labs to add impedance to the ground circuit as long as other circuit requirements are met.

  This test may be required in order to see the impact on the various poles as they clear.
  The recommendation:
    - In the case of three-phases tests made on three-phase reclosers, both the source and load neutrals shall be earthed for 25% to 30% of the T20 unit operations specified in column 6 of Table 11, Table H.3, and Table H.4. For the balance of the tests, either the load neutral or the supply shall be earthed, but not both. If single-phases tests are made, an earth shall be placed on the test circuit.
      - Note: The grounding of both source and load neutrals simulates application on multi-earthed wye (Y) systems, which are commonly found particularly in the United States.
    - Suggested to remove kpp=1,0 from the subclause heading and also from Table 11. Revised by placing kpp = 1.0 in the Note in the above proposal so as to retain the informational tie to kpp = 1.0
    - General agreement that the proposal helps to provide clarity, there is some concern about how the IEC may respond.

  The proposal is to be placed in the draft. IEC members are asked to provide input if they have concerns. Comments to be expected during the ballot process.
- Index 86 (https://ieee-sa.imeetcentral.com/c37-60/folder/WzIwLDE3OTg0NTc3XQ):
  Review and reference to IEC 60255-26:2023 (Sergey Rogozhkin)
- Index 69 (https://ieee-sa.imeetcentral.com/c37-60/folder/WzIwLDE3OTkwMTYxXQ/):
  Vacuum interrupter in SF6 insulated equipment (Harm Bannink)

Ad hoc groups:

- Index 35 (https://ieee-sa.imeetcentral.com/c37-60/project/WzksMzM5NDE4MjVd/): Simultaneity of poles (Karla Trost, David Dart, David Beseda, Marcos Botelho)
  Karla Trost showed the presentation prepared by the ad hoc group. 6.101 was the chapter where more modifications were discussed in Milano meeting. Requirements are optional and times should be in line with circuit-breaker standards. Last sentence is explaining that if an intentional delay exists, then it is not in the scope of this chapter.
  A member commented that it is not totally clear when this is applicable, and which is the default option. It is clearer for the first sentence to say, for example, "The following requirements may apply by agreement between manufacturer and user." Ad hoc group is going to update the verbiage to make it clearer.
  Additionally, several comments have been received about when additional type and routine tests are necessary and whether this parameter should be recorded in type tests only or also in routine tests.
  ➔ Ad hoc will continue to work and topic will be discussed again during the IEEE PES Spring meeting.
- Index 39 (https://ieee-sa.imeetcentral.com/c37-60/folder/WzIwLDE3OTU3NjA4XQ/): Line-powered devices (Karla Trost, Alexander Sergeyenko)
  Alexander Sergeyenko showed the presentation including the modifications proposed. In particular few members commented about the last chapter 6.4.1.3 referring to battery powered. The proposal was that 6.4.1.3 only applies to devices for which battery is the primary power source, not devices with backup batteries. It was suggested to clearly specify the application of 6.4.1.3, and further to consider making it apply to both primary and backup battery powered devices.
  ➔ Ad hoc will continue to work and a new proposal for the last subclause will be prepared.
- Index 49 (https://ieee-sa.imeetcentral.com/c37-60/folder/WzIwLDE3NzMyNjg5XQ): Manual operating lever (Mark Feltis, David Beseda, Karla Trost and Chris Hastreiter)
  Karla recommended to do not cover this topic during the today meeting.
  This topic has not been discussed and moved to S24 face-to-face meeting.

7. Open works

Review the open work planned for S24 and any other open tasks which need further discussion.

The following items from today's agenda were not covered due to time. These topics are expected to be reviewed in Ft. Lauderdale

- Index 75 Reference to IEEE C37.68 (Ian Rokser)
- Index 86 (https://ieee-sa.imeetcentral.com/c37-60/folder/WzIwLDE3OTg0NTc3XQ): Review and reference to IEC 60255-26:2023 (Sergey Rogozhkin)
- Index 69 (https://ieee-sa.imeetcentral.com/c37-60/folder/WzIwLDE3OTkwMTYxXQ/): Vacuum interrupter in SF6 insulated equipment (Harm Bannink)

- Index 49 Manual operating lever (Mark Feltis, David Beseda, Karla Trost, Chris Hastreiter and Chris Ekpoudom)

Additionally, Ian reviewed other open items which are planned to be reviewed in Ft. Lauderdale. All are on track with notes listed.

- Index 5 (BIL)
- Index 14 (TCC)
- Index 16 (SSAO)
- Index 24 (50/60 Hz)
- Index 54/55 (Extension of type test results)
  - ➔ Action: Karla to coordinate a meeting of the two groups.
- Index 62 (LC/CC test voltages)
- Index 64 (Travel transducers)
- Index 66 (References to C37.301)
- Index 70 (Adopt the work from Jan 24 mtg for 7.103.4.1 and 7.103.4.3)
- Index 82 (DC vs VLF) – So far, utilities have indicated to Ian that they still perform DC tests.
- Index 83 (TRV table updates)
- Also list from ppt of individual actions (10, 12, 33, 37, 42, 44, 45, 67, and 84).

8. Next steps/ meeting(s):

Face-to-face meeting – IEEE PES Spring in Fort Lauderdale (April 2024)

Next face-to-face meeting will be at IEEE PES Spring in Fort Lauderdale with 4 sessions (2 on the afternoon of Tuesday April 2nd and 2 on the morning of Wednesday April 3rd).

9. Adjournment

Meeting has been adjourned at 10:48.

LIST OF ATTENDEES

Status	Last name	First name	Affiliation	Attended February 28th 2024
Convenor	Rokser	Ian	Eaton - IEC USA	X
Secretary	Di Michele	Federico	CESI - IEC Italy	X
IEC Member	Bannink	Harm	G&W - IEC Netherlands	X
IEC Member	Botelho	Marcos	Siemens - IEC Germany	X
IEC Member	Dart	David	Noja Power - IEC Australia	
IEC Member	Falkingham	Leslie	Representing VIL and S&C - IEC United Kingdom	X
IEC Member	Kerr	Blair	G&W - IEC USA	X
IEC Member	Khlyzov	Alexander	IEC Russia	
IEC Member	Kou	Zhengli	IEC China	
IEC Member	Manavar	Suresh	IEC United Kingdom	
IEC Member	Micic	Stefan	G&W - IEC USA	X
IEC Member	Rogozhkin	Sergey	Tavrida - IEC Russia	X

Status	Last name	First name	Affiliation	Attended February 28th 2024
Member	Bush	Kelsey	ABB	
Member	Hirz	Harry	VESCO	X
Member	Darko	Kennedy	G&W	
Member	Feltis	Mark	Schweitzer Eng	X
Member	Kapitula	John	ABB	X
Member	Li	Eric (Qian)	Powertech Labs	
Member	Neujahr	Jonathan	Eaton	
Member	Olivares	Roberto	Siemens	X
Member	Riley	Caryn	NEETRAC	X
Member	Schuetz	Rob	Eaton	
Member	Slattery	Christopher	First Energy	
Member	Trost	Karla	G&W	X
Member	Zhou	Xin	Eaton	X
Member	Balasubramanian	Ganesh K	Eaton	X
Member	Beseda	David	S&C	X
Member	Ekpoudom	Chris	Southern States	X
Member	Stemmerich	Joe	Trayer Engineering Corporation	X
Member	Herring	Ricky	Siemens	
Member	Castillo	Pedro	ABB	X
Member	Marshall	Cody	Schweitzer Engineering Laboratories	
Member	Sigmon	Hall	Siemens	X
Member	Hastreiter	Chris	Eaton	X
Member	Pell	Stephen	Siemens	
Member	Chhabra	Mohit	S&C Electric	X
Member	Kirkpatrick	Brendan	SCE	X
Member	Dhawan	Anil	Allegis Groups	X
Member	McKinney	Kenneth	UL solutions	
Member	Busilan	Dan	Dominion Energy	X
Member	Found	Paul	BC Hydro	X
Member	DeCesaro	Frank	DeCesaro Consulting Solutions	X
Member	Agliata	Peter	S&C Electric	X
Guest	Davies	Stacey	Siemens	X
Guest	Sergeyenko	Aleksandr	Tavrida Electric	X
Guest	Kirienko	Vladimir	Tavrida Electric	X
Guest	Hatfield	Ben	Trayer Engineering Corporation	X
Guest	Martz	Jaden	S&C	X
Guest	Bhrugen	Amin	S&C	X