RODE C37.75 Switchgear Enclosure Integrity Working Group Meeting Minutes

October 18, 2022 – Burlington, VT

Chair: Anil Dhawan **Secretary**: Karla Trost

Meeting Agenda

1) Call to Order **Anil Dhawan**

The meeting was called to order at 1:00PM.
The first session was paused for break at 3:40PM
The second session was called to order at 4:14PM.

2) Patent and Copyright Slides **Anil Dhawan**

The patent and copyright slides were shown. No patent or copyright issues were brought to the attention of the chair.

3) Introduction of Members and Guests

Members and guests performed self-introductions.

4) Attendance and Quorum Check **Karla Trost**

Of 18 Members (9 Required for Quorum) there were:
9 members and 18 guests present for the first session.
9 members and 16 guests present for the second session.

1 Guest, I. Rokser, requested membership in the working group. Based on attendance and work performed, membership was granted by the chair and will be effective at the next meeting.

5) Approval of Agenda **Anil Dhawan**

F. Soulard made a motion to approve the agenda. E. Almeida seconded. Motion passed by consensus.

6) Approval of Previous meeting minutes **Anil Dhawan**

Minutes from Spring meeting (April) and webmeeting (May) attached.

S22RODEWG3775_ Minutes.pdf 2022May02WG3775 _Minutes.pdf

A vote was taken in August 2022 – See Appendix B for details.
K. Trost motioned that we provide a copy of the pre-publication draft of C37.75 to the C37.63 Working Group for reference and possible inclusion in their document.
Seconded by C. Riley

Of 17 members, 13 approved and 2 abstained. Motion passed.
K. Trost provided a pdf copy of the ballot document to F. DeCesaro.

F. Soulard made a motion to approve the minutes. C. Riley seconded. Approved by consensus.

7) Action Items from previous meetings

a) Review of Results of Ballot **Anil Dhawan**

b) Proposal on how to handle comment resolution **Anil Dhawan**

i) Motion by Chair/ Secretary. C. Ambrose Second. Approved by consensus.

c) In meeting comment resolution

i) I-47 – Revise with text in red and using the word Published instead of Current.

This standard provides an enclosure integrity standard which is specific to the needs and applications of switchgear (such as reclosers and other distribution equipment) and the associated controls. Current enclosure integrity standards, ~~referenced by previous switchgear standards~~ such as the C57.12.XX series developed by the Transformer Committee provide historically proven criteria for many aspects of the Switchgear Enclosures but do not provide requirements nor testing for control enclosures.

ii) I-19 – Discussion regarding if WG wants to expand the scope to cover other equipment.

(1) Other equipment can choose to continue to reference other documents or can reference this document without a scope change.

(2) The working group is choosing to keep the scope as is and reject the comment.

iii) I-34/ I-25 – Preference is to pull the information in from the document.

(1) Reproduce the language, copy the figure from -2002. Action – K. Trost

iv) I-38 –

(1) Discussion on if it is ok to split the definition so that part of it becomes informative (note) vs normative.

control enclosure: Cabinet made of metal, fiberglass, or other material designed to house a distribution switchgear control. The enclosure includes the housing, mounting, and permanent outside surfaces.

NOTE—Where applicable, cabinet venting, gasketing, or manufacturer supplied enclosure mounting components are included. It does not include items which are control specific which may include external connectors, hubs, or other cable entrances, internal components (such as electronic components, microprocessor-based relays, power supplies, or radios) or removable security devices.

(2) Comment will be Revised.

v) I-67 – Revise – WG will eliminate the definition of publicly accessible with the acceptance of I-8 (addition of hierarchy).

vi) I-40 – Reject – controls are located in both indoor and outdoor locations.

vii) I-30/I-29/I-86 –

(1) Comment 86: Revise as proposed except change to be and/or

Subclause 3.3 of IEEE Std 37.100.1-2018 is applicable. Exposure to chemical or electrochemical reactions may be encountered in a subgrade environment. These chemicals may contribute to mild corrosive reactions.

For these and other special service conditions, design requirements and/or design tests shall be defined by the manufacturer ~~and~~ or user.

(2) I-30 and I-29 accept

viii) I-51: Reject because the requirements for a coastal enclosure (including stainless steel design requirements and substrate exposure tests) do not require a SCAB test.

ix) I-53: Reject with I-51

x) I-35: For SCAB change to be 3 non-coastal applications. Agree to remove the impact test for publicly accessibly coastal due to substrate tests.

xi) I-54: Reject same as I-51.

xii) I-21/I-42: Revise with shown proposal but add "the" before user and manufacturer. Applicable sections marked within Table 2 assume the control enclosure is not protected by another enclosure. For ~~this~~ the service condition of another enclosure (e.g. switchgear enclosure) providing protection for the control enclosure, user and manufacturer shall agree to design and test criteria.

xiii) I-55: Approve

xiv) I-81: Revise. Add 6.1.1 to the table, leave all spaces blank. Add a footnote to the title. The footnote would provide direction "for pad-mounted control enclosures see Table 3."

xv) I-48: Revise – use version shown in redline. Update titles for Table 1 and 2 to align.

379 **5. Enclosure ~~Material~~ dDesign, material, and cCoating sSystem rRequirements**

xvi) I-43: Proposal to add "Refer to Table 1 and Table 2 for the applicability of the requirements in the "following sub-clauses" for the particular type of equipment being considered."

(1) Working Group agreed. This will be in addition to 4.2.

xvii) I-88: Working group agreed with redline version.

380 **5.1 ~~Objective~~General**

381 The objective of this clause is to describe design requirements for pad-mounted, pole mounted, and submersible
382 enclosures used in Normal service conditions. ~~Other performance requirements may be needed to provide long field~~
383 ~~life in other environments.~~

384 Refer to Table 1 and Table 2 for the applicability of the requirements in Clause 5 for the particular type of equipment
385 being considered.

386 **5.2 Design requirements**

387

388 **~~5.1.1~~5.2.1 Accessibility**

389 Subclause 5.1.1 of IEEE Std C57.12.28™ -2014 is applicable with the following modification.

390 The sentence, "Additionally, all exterior surfaces of the enclosure shall be accessible for the purposes of inspection
391 and maintenance of the enclosure over the life of the equipment." is not applicable to control enclosures.

392 **~~5.1.2~~5.2.2 Contaminant accumulation**

xviii) I-89: Working group agreed with proposal in ppt.

The objective of this clause is to describe design requirements for pad-mounted, pole mounted, and submersible enclosures used in Normal service conditions. ~~Other performance requirements may be needed to provide long field life in other environments.~~

xix) I-70: E. Almeida motion - Change to "provides the structural integrity of the enclosure over the expected service life of the device when maintained per the manufacturer's instructions." R. Lau second. Approved by consensus.

xx) I-90: Reject. 5.2.1 applies to all.

xxi) I-83: Revise. Add a statement that the manufacturer must document which standard they meet.

xxii) I-22: Revise use the term "another enclosure (e.g. switchgear enclosure)" instead of switchgear enclosure to match change under Table 2.

xxiii) I-102: It would be too onerous on both the manufacturer and the user to send unsolicited information. Reject as the manufacturer is already required to maintain the test data.

xxiv) I-72: Revise for clarity. **D. Beseda to propose language.**

xxv) I-4: **I. Rokser to review with test engineers and propose a response.**

xxvi) I-52:

(1) Discussion – User does not understand the inclusion of the waiver. One proposal to change the "300 series" to 316 stainless steel. This subclause is specific to the coating requirements.

(2) Accept the comment and will remove the exception.

xxvii) I-1: Reject. One reason that the subcommittee chose to write their own standard was due to this change from 2005 to 2014 in C57.12.28.

xxviii) I-95: Strike last sentence of 5.3.2.

xxix) I-44: ok as proposed.

Recommend changing 6 to Enclosure assembly design, test, and test equipment requirements
6.2 Design requirements
6.3 Test equipment requirements
6.4 Design tests and
6.5 test values becoming 6.4.8

xxx) I-96: Confirm with style manual for applicable vs relevant. K. Trost *Action item cancelled by decision on I-103.*

xxxi) I-103: Revise – end sentence at -2014 applicable.

xxxii) I-98: **Review with commenter – K. Trost**

xxxiii) I-97: Agree to delete.

xxxiv) I-36: Reject as there was no proposed change. The WG feels the applicability tables are clear in this regard.

8) New Items:

a) D2.0 Line 331 –

i) C37.63 and C37.74 are going to align with C37.62 to measure the water depth from the 3m to the base of the unit.

ii) Motion by T. Johnson to change "top surface" to "base". F. Soulard second.

(1) Discussion: Should the language be changed to not limit this to control enclosures?

(2) D. Beseda – motion to amend the current motion to also remove the word Control and change the beginning to "depth of water".

(a) "Depth of water does not exceed 3 m above the base of the enclosure…."

(b) E. Almeida second.

(c) 8 approve, 0 abstain, 0 negative.

(3) Change from Top Surface to Base

(a) 8 approve, 0 against, 0 abstain

9) **Next Meeting –** A virtual meeting will be held. A poll will be sent out to determine the date/time.

10) Adjournment 6:02PM

Annex 1: Attendance

Role	First Name	Last Name	Company	10/18/22
Chair	Anil	Dhawan	Allegis Group	X
Member	Edwin	Almeida	Southern California Edison	X
Member	Chris	Ambrose	Federal Pacific (Div. of Electro-Mechanical Corp.)	X
Member	David	Beseda	S&C Electric Co.	X
Member	Michael	Culhane	Eaton	
Member	Katherine	Cummings	G&W Electric	
Member	Mark	Feltis	Schweitzer Engineering Laboratories, Inc	
Member	Paul	Found	BC Hydro	Ex
Member	Travis	Johnson	Xcel Energy	X
Member	Brendan	Kirkpatrick	Southern California Edison	Ex
Member	Robert	Lau	nVent Hoffman	X
Member	Benson	Lo	Toronto Hydro	
Member	Al	Pruitt	The Durham Company	
Member	Caryn	Riley	Georgia Tech/NEETRAC	X
Member	Francois	Soulard	Hydro-Quebec	X
Member	Joe	Stemmerich	Trayer Engineering	
Member	Joseph	Wisnewski	UL LLC	
Secretary	Karla	Trost	G&W Electric	X
Guest	Frank	DeCesaro	DeCesaro Consulting	X
Guest	Jeffrey	Gieger	ABB/ Elastimold	X
Guest	Christopher	Hastreiter	Eaton	X
Guest	Harold	Hirz	G&W	X
Guest	John	Kaminski	Siemens	X
Guest	John	Kapitula	ABB	X
Guest	Donald	Martin	G&W Electric Co.	X
Guest	Roberto	Olivares	Siemens	X
Guest	Ian	Rokser	Eaton Corp	X
Guest	Jackie	Kandel	Powell Ind	X
Guest	Jonathan	Wear	JST Power	X
Guest	Ken	McKenney	UL Solutions	X
Guest	Jen	Santulli	IEEE SA	X
Guest	Leonel	Santos	Schneider Electric	X
Guest	Jeff	Ricker	Schneider Electric	X
Guest	Chris	Ekpoudom	Southern States	X
Guest	Kelsey	Bush	ABB Elastimold	X

Annex 2: August Vote

Trost, Karla L

From: Trost, Karla L
Sent: Tuesday, August 9, 2022 7:10 AM
To:
Subject: RE: C37.75 - Request from C37.63 Working Group - VOTE REQUESTED - RESPOND BY AUGUST 8th, 2022

All,
The vote has closed. We received 13 approve votes, 2 abstentions (myself and Anil), and were missing 2 responses.
I will send Frank a copy of the ballot draft.
Karla

From: Trost, Karla L
Sent: Friday, July 29, 2022 9:26 AM
To:
Subject: RE: C37.75 - Request from C37.63 Working Group - VOTE REQUESTED - RESPOND BY AUGUST 8th, 2022

All,
I received a second from Caryn Riley. Therefore, we will proceed with the vote.
Please reply with either APPROVE, REJECT, or ABSTAIN by August 8th, 2022 to the motion:
that we provide a copy of the pre-publication draft of C37.75 to the C37.63 Working Group for reference and possible inclusion in their document.

Thank you,
Karla

From: Trost, Karla L
Sent: Friday, July 29, 2022 9:16 AM
To: Subject: C37.75 - Request from C37.63 Working Group

THIS MESSAGE WAS SENT FROM AN EXTERNAL SENDER

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