

C37.74 Working Group Meeting Agenda

October 11th, 2021 1:30 PM; October 12th, 3:45 PM – Virtual Meeting

Chair: Kennedy Darko

Vice-Chair:

Secretary:

Travis Johnson

Meeting Agenda

1. Call to Order
2. Sign-in through chat (name and affiliation)
3. Call for new members
4. Call for patents – No comments on patent and copyright slides
 - a. [Patent Slides](#)
 - b. [Copyright Slides](#)
5. Approval of Spring meeting minutes Francois Soulard approve Dave Beseda second
6. Approval of the Agenda – Karla Trost accepts with correction Francois S second
7. New Business
 - a. All project documentation to be accessed through ImeetCentral
 - b. Review approved PAR – Approval by consent, no one objected
 - c. Review and Harmonization
 - i. Editorial review of C37.74 – Volunteer Dave B., Nenad U., Rahul Jain,
 1. IEEE 1247 recalled and replaced with C37.30.4
 2. Replace C57.12.28 with C37.75
 - ii. Harmonization– Volunteer – Edwin Almeida, Karla T., Stephen Pell, C37.74 with C37.100.1, C37.62, C37.60 etc
Nenad volunteer to look a the arc resistant document
 - d. Initial technical items
 - i. Submersion definitions – Volunteer – RODE will vote on the definition.
Individual standards will need to address device standards. Can carry over C37.62 into C37.74, or not?
 - ii. Magnetizing current test – Volunteer – Frank D, Kennedy D,
 1. Question was asked on the magnetizing current. The answer will be address in the C37.74 revision. The actual service condition depends on size and manufacture of transformer. Testing labs get questions if this is required. If you go to the letter of the law, you need to test on the transformer you are putting it on, but no one actually does that. The essence is if you look at the magnetizing current test it is specific to a kVA. Anything outside of that would not be applicable. Even if you go into IEEE 1247 it says if you have a switch that passes the line testing it assumes that you will deal with the unloaded test.

- iii. Fault making test – Volunteer – Kennedy D, Harm Bannink,
 - 1. Peak current on outside pole – Need to look at the alignment, fault currents for multiple attempt and not getting the outside pole counts, some switch pre-strike at high level so difficult to obtain in some cases.
 - 2. 37.74 references back to 1247. When you do fault making you need to do three closings into the fault and the peak needs to be asymmetric hit. There is difficulty with this because in Peak withstand test, the device is closed, and lab can control the making current. If you must close then you can have much more than three attempts. Does anyone have a better understanding on why it needs to be on an outside pole from past?
 - a. With short-time it is on the out pole to maximize the forces. Kennedy says maximizing the forces is demonstrated in the peak withstand where the closing angle is lab controlled.
 - b. Is it because of the pre-strike and arcing condition that may cause the contact to weld. We would want to have it during fault closing just for the arcing influence on it.
 - c. Does the breaker standard deal with this? Need to check into this.
- iv. Cable and Line charging - Volunteer – Kennedy D, Caryn Riley,
 - 1. Restrike criteria –
 - a. How many are permitted class A or B – pull from IEEE 37.60 or 37.62? Where should we go? If you look at C37.62 or C37.60 you are permitted a certain number of restrikes.
 - b. Should C37.74 follow what C37.62 and C37.60? Also look at capacitor C37.100.2. Will request a copy of C37.100.2 and put it on ImeetCentral for access.
- v. C37.100.7 – Continuous current performance – Volunteer –
 - 1. Part of our initial review.
 - 2. Continuous current performance in C37.100.7 recommendation is that the temperature rise tables should be left alone and that manufacturers should claim compliance. The reason is that for alternative gases
 - a. Are we going to change the tables for gas mixtures? There is little information regarding temperatures that the gases must survive for 30 years.
 - b. This working group has 9 sub-groups.
 - c. From where we stand right now the table will stay put.
- vi. C37.100.6 – Siesmic test sample selection – Need volunteers to help draft annex in the standard to cover C37.74. *Need to remove C37.74 from this standard.* (RODE Subcommittee Chair will contact the C37.100.6 to resolve)

- vii. Can we introduce the language from C37.62 for BIL testing with vacuum contacts into C37.74? From Joe Stemmerich Volunteer – Kirk Smith, Joe Stemmerich, Kennedy Darko, Edwin Almeida
- viii. Found additional technical item – no reference for tank requirement for tanks that have outside semiconductive insulated materials, need to address touch potential and other related items. This is a gap that needs to be addressed for tanks that have semi-conductor tank instead of metallic. Volunteer – Edwin Almeida,
- ix. Do we still have the partial discharge requirements? C37.301 need to make sure we are in harmonization, concerned about encapsulated vacuum bottle. C37.301 is currently in revision. Volunteer – Francois S,

Visible Gap – should it get included. Will need to take a look. Not sure what the final outcome was. Should RODE just add it and do our own thing?
Testing groups are adding in visible breaks. Do you test the vacuum and air portion? Volunteer – Frank D, Edwin A,

This touches a lot of standards, RODE cannot be alone. Maybe just move forward with just RODE and Switchgear Committee was unable to move forward. Bring it up at ADSCOM to move the definition forward, need to discuss at RODE. Take the pulse to see if can get this moved forward. Edwin Almeida is interested in participating.

Suggested reviewing old minutes for items that have been shelved for C37.74 to bring into this next revision (such as harmonization).

Harmonization will have the editorial review to check the standard references, then check harmonization, so have document.

8. Next Meetings

Plan on asking users any additional items that need to be included.

Start going through the editorial piece tomorrow.

Francois – Visible break

Frank D – magnitizing current notes

Karla is going to try and assign people using MS Teams into various breakout groups.

Kennedy is going to request documents to get uploaded to iMeet.

Caryn move to adjorn. Karla seconded to adjorn.

9. Breakout Session

- a. Design and Construction to be renumbered as Clause 6; Design Tests to 7, Routine tests to 8, and Additional to 9 (maybe include shipping in 9)
 - i. Carry over 6.1 & 6.2 (Liquid and Gas) from 37.62
 - 1. Review 9.4-9.6 and incorporate.
 - ii. Review Grounding from 37.62 and combine as appropriate
- b. Will need to add Tolerance Annex and may need to add others from 62 (TRVs)
- c. Definitions –
 - i. Need to review definitions against the online dictionary (**K. Trost**)
 - ii. Need to reference Fault Interrupter definition from 62.
 - iii. Need to add “Submersible” and related definitions once RODE approves.
 - iv. Add dry vault.
 - v. Replace Subsurface? Delete Vault
 - vi. Note – dictionary says “padmounted”; 62 says “pad-mounted”
- d. Update the Normal and unusual service conditions to align with 37.62
 - i. Technical review needed of 4.2.3 and 4.2.6 as it differs from 62
- e. If C37.74 is supposed to be an overarching standard which then references 60, 62, 63, & 66 – need to update the PAR and add verbiage/ oversight especially in regards to what characteristics/ratings take priority.
 - i. This may require ratings to be carried over from other documents – and impacts the nameplates.
- f. Technical review of 9.2 & 9.3 need to be reviewed again 62 and other RODE docs.
- g. Technical review of 9.9/9.10 and redirect to 37.75 as applicable.

The word document has macros and cannot email it and must be kept in iMeet Central. Do not email because it will not go through.

Annex 1: Attendance

Role	First Name	Last Name	Company	10/11/2021
Member	Edwin	Almeida	Southern California Edison -- Long Beach, CA	X
Guest	Chris	Ambrose	Federal Pacific, Bristol, VA	x
Member	Harm	Bannink	G&W Electric Co, Bolingbrook, IL	x
Member	David	Beseda	S&C Electric Company - Chicago, IL	x
Member	Antone	Bonner	Self (Retired), Oconomowoc, WI	x
Guest	Christopher	Borck	Eaton Power System Division	x
Guest	Dan	Busilan	Dominion Energy	x
Guest	Kate	Cummings	G&W Electric Co, Bolingbrook, IL	x
Chair	Kennedy	Darko	G&W Electric Co, Bolingbrook, IL	x
Member	Frank	DeCesaro	DeCesaro Consulting Services, LLC	x
Guest	Doug	Edwards	Siemens	x
Guest	Claude	Florvil	PSEG	x
Guest	Paul	Found	BC Hydro	

Guest	Richard	Frye	Eaton	
Guest	Jose	Gamboa	The H-J Family of Companies	
Guest	Jack	Geng	Powertech Labs, Surrey, BC	x
Guest	Brian	Gerzeny	Powell Industries, North Canton, Ohio	x
Member	Jeffrey	Gieger	Thomas & Betts	
Guest	Ilya	Glinsky	Southern California Edison, Westminster, CA	X
Guest	Christopher	Hastreiter	Eaton, South Milwaukee WI	X
Member	Harold	Hirz	G&W Electric Co, Bolingbrook, IL	X
Guest	Isaak	Benjamin	American Electric Power	
Member	Rahul	Jain	S&C Electric Company - Chicago, IL	X
Secretary	Travis	Johnson	Xcel Energy, Denver, CO	X
Guest	John	Kapitula	ABB	X
Guest	Brendan	Kirkpatrick	Southern California Edison	X
Member	Wangpei	Li	Eaton	
Guest	Colby	Lovins	Federal Pacific, Bristol, VA	X
Guest	Don	Martin	G&W Electric Co, Bolingbrook, IL	X
Guest	Ashley	Moran	IEEE SA	
Guest	Chris	Morton	Powertech Labs, Surrey, BC	X
Member	Stephen	Pell	Siemens	X
Guest	Larry	Putman	Powell IND	X
Guest	Vaidyanathan	Ramasetu	G&W Electric	
Member	Caryn	Riley	Georgia Tech/NEETRAC, Atlanta GA	X
Member	Grant	Ringham	BC Hydro	
Guest	Ian	Rokser	Eaton	
Guest	Kirk	Smith	Self (Retired)	X
Guest	Noel	Smith	FortisAlberta	X
Guest	Francois	Soulard	Hydro-Quebec	X
	Joe	Stemmerich	Trayer Engineering Corporation	X
Guest	Jon	Spencer	Utility Solutions	
Guest	Andrew	Swisher	Southern California Edison	X
Guest	Tim	Tillery	Howard Industries Laurel, MS	X
Member	Karla L	Trost	G&W Electric Co, Bolingbrook, IL	X
Guest	Nenad	Uzelac	G&W Electric Co, Bolingbrook, IL	X
Guest	William	Walter	We Energies	
Guest	James	Wenzel	Eaton	
Member	Michael	Whitney	S&C Electric Company	
Guest	Joseph	Wisnewski	UL LLC	X