

IEEE/PES Transformers Committee Working Group on Requirements  
For Three-Phase Submersible Transformers (C57.12.24)

**Virtual Meeting Minutes**

Tuesday, April 27, 2021

Members Present

First Name	Last Name	Company
Piotr	Blaszczyk	Specialty Transformer Components
David	Blew	Retired (PSE&G)
John	Chisholm	IFD Corporation
Thomas	Dauzat	General Electric
Larry	Dix	Quality Switch, Inc.
William	Elliott	Prolec GE
Benjamin	Garcia	Southern California Edison
Carlos	Gaytan	Prolec GE
Said	Hachichi	Hydro-Quebec
Kenneth	Hampton	Baltimore Gas & Electric
John	Harley	FirstPower Group LLC
Ramadan	Issack	American Electric Power
Brian	Klaponski	Carte International Inc.
Brad	Kittrell	Consolidated Edison Co. of NY
Andrew	Larison	Hitachi Energy
Alejandro	Macias	CenterPoint Energy
Kent	Miller	T&R Electric Supply Co.
Charles	Morgan	Eversource Energy
Daniel	Mulkey	Mulkey Engineering Inc.
George	Payerle	Carte International Inc.
Juan	Ramirez	CELECO
James	Ratty	Electronic Technology Inc.
Pedro	Salgado	Electronic Technology Inc.
Avijit	Shingari	Pepco Holdings Inc.
Audrey	Siebert-Timmer	IFD Corporation
Michael	Thibault	Pacific Gas & Electric
Alan	Traut	Howard Industries
Reinaldo	Valentin	Duke Energy
John	Vartanian	National Grid

Guests Present

First Name	Last Name	Company
Scott	Abbott	PPG
Jerry	Allen	Metglas, Inc.
Nabi	Almeida	Prolec GE
Angela	Amador	EATON Corporation

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Gregory	Ante	Southern California Edison
Zoran	Goncin	PTI Transformers
Michael	Gonzales	Southern California Edison
Kendrick	Hamilton	Power Partners, Inc.
Olivier	Lejay	Huaming USA Corp.
Xose	Lopz-Fernandez	Consultant
Tiffany	Lucas	SPX
Rosamise	Magee	PSEG
Bob	Page	EATON Corporation
Vinay	Patel	Consolidated Edison Co. of NY
Chris	Pitts	Howard Industries
Clemens	Reiss IV	Custom Materials, Inc.
Dan	Schwartz	Quality Switch, Inc.
Ewald	Schweiger	Siemens Energy
Jeremy	Sewell	Quality Switch, Inc.
Adam	Sewell	Quality Switch, Inc.
Stephen	Shull	BBC Electrical Services, Inc.
Mauricio	Soto	Hitachi Energy
Joseph	Tedesco	Hitachi Energy
Eric	Theisen	Metglas, Inc.
Timothy	Tillery	Howard Industries
Joshua	Verdell	ERMCO
Shelby	Walters	Howard Industries
Bruce	Webb	Knoxville Utilities Board
Bill	Whitehead	H2 Scan
Alan	Wilks	Consultant
Malia	Zaman	IEEE
Michael	Zarnowski	Carte International

The F21 Webex meeting was called to order at 9:25 AM CT with Ben Garcia as chair, Tom Dauzat as vice-chair and George Payerle as secretary. There were 29 members and 32 guests in attendance. Total membership is 51 so there was a quorum. 1 guest requested membership. Avijit Shingari and Andrew Larison were recognized as new members since the Spring 2021 meeting. Membership requirement for 12.24 is that you have attended 2 meetings in a row or 3 of the last 5.

George Payerle moved to approve the agenda and Dan Mulkey seconded. The motion passed unanimously. Said Hachichi moved to accept the minutes of the spring 2021 virtual meeting and Ken Hampton seconded. The minutes were approved unanimously.

The chair called for essential patents. There were no disclosures. The chair showed and explained the copyright slides. Work on the PAR was begun at the S19 Anaheim meeting. The PAR will expire December 31, 2023. We have 2 working meetings to finalize the draft and get it to review and resolve comments.

Old Business – there was no old business.

Work continued on revision of the spec.

Section 7.1 The chair said that introduction of 5000 kVA into Figure 1 would require that the title and scope of the document change, and for that reason will be dealt with after this revision and addressed

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during the next PAR. The group did consider the chair's editorial revision of table 1 which was to display the rectangular transformers on the left and round transformers on the right table in order of kV-BIL/kVA from top to bottom. Dan Mulkey moved to accept this change, Will Elliott seconded and the motion passed.

There was discussion about whether to indicate a preferred location for fusing on Fig 2. Based on feedback from the WG, the chair will update the figure by extending the shaded section labeled "preferred area for primary switch handles" to the right and include that fusing is included to the notation. The chair will make this update before the next WG meeting to bring it to a vote.

In Figure 2, Will Elliott made a motion to move the existing Note 2 (dimensions are in mm...) into the table associated with Figure 2 because the note deals with the table and is informative in nature. The existing Note 1 ("H1B, H2B,...") and the new Note 2 ("H0 connection...") was moved from below the table in Figure 2 to below the figure since these notes relate to the figure and not the table. Alex Macias seconded. A poll was taken to make the changes to Figure 2 and approved.

It was further decided to change the wording on the top view of the transformer from X0 H0 to X0 or H0/X0. The chair will make the change and then it will be voted on at the next meeting.

The Figure 2 title was change to "Preferred location and arrangement of transformer cover Wording" and was approved without objection.

Section 7.2: Removed the word 'instruction' before the work "nameplate." Was approved without objection.

Section 7.2.1: Added the words 'by the user' after the words as specified" in the first sentence. Also added 'or integral bushings' after 'The bushing wells' in the second sentence. Dan Mulkey made a motion and George Payerle seconded. The motion passed without objection.

Section 7.2.1: The third sentence shall be changed to "One parking stand shall be provided for each primary bushing." The new wording was approved without objection.

The last 2 sentences of 7.2.1 were suggested to be deleted by the task force as redundant, Mike Thibault made the motion and Dan Mulkey seconded to leave these sentences in as aids to the users, because although it may be redundant, it provides readers the "why" HV connectors are located on the cover (hot-line tool usage) and where to find more information on separable connectors. The motion to leave the proposed deleted passage in the standard was passed without objection.

Discussion at S22 should begin with page 10, table 4.

Respectfully Submitted by: Ben Garcia, Chairman C57.12.24 Working Group