Working Group for IEEE 259

Unapproved Meeting Minutes

Spring 2023 Meeting
Hyatt Regency Milwaukee
Gilpatrick Meeting Room
Milwaukee, WI

3:15 PM CDT, Monday, November 20, 2023

Chair: David Stankes
Vice-Chair/Secretary: Joseph Tedesco

This was the sixth meeting of the IEEE 259 Working Group. The meeting was held in the Gilpatrick Meeting Room and Dave Stankes called the meeting to order at 3:14 PM.

Quick introductions were made by everyone in attendance.

There were ultimately 39 people present in the meeting, with 12 members and 27 guests. No one requested membership. Some attendees arrived after the meeting had begun, and a quorum check was done twice. The first time a quorum check was made, there were only 7 members present. After giving people a few moments to arrive, there were 9 members. The Working Group had 17 members; therefore, a quorum was reached, and business could proceed.

Dave and asked for a motion to approve the agenda. Aniruddha Narawane moved to accept the agenda, with Vijay Tendalkar Saraf seconding the motion. There was no discussion, and approval of the agenda was unanimous.

Dave then asked for a motion to approve the minutes of the last meeting. Colby Lovins so moved, with a second from Casey Ballard. There was no discussion, and the approval of the minutes was unanimous.

Dave showed the patent and copyright slides. He asked if there were any patent or copyright concerns from those in attendance; no one had any concerns or noted any patent/copyright issues.

Old Business:

- Dave Stankes discussed finishing the standard and the results of the polls shown at the October 2022 meeting. He continued discussing the decisions made by the task force leaders to move the draft forward:
    - The outcome of the standard would be a TI (thermal index) and not a RTI (relative thermal index).
    - The standard would use thermal degradation as the primary aging test, instead of other multi-factor elements (vibration, moisture, etc.).
    - The maximum voltage would be 600 V, to avoid conflict with IEEE C57.12.60.
    - There would be a simplified discussion of test specimens.

    - The ability to modify an insulation system would be added.
- Dave states that IEEE 259 was developed to test insulation systems for transformers compliant with NEMA ST 1 and NEMA ST 20. The current revision of NEMA ST 20 calls for insulation system tested to UL 1446.
- Dave discusses the current structure of task forces.
    - Normative references
    - Definitions
    - Insulation test specimens
    - Test procedures and diagnostics
    - Interpretation of data
    - Modification of insulation systems (this task force will have to be created)
- The latest draft would be posted so that all members and guests would have access.
- Dave discusses the plan for holding virtual meetings between now and the meeting in the fall (~1/month), and then to meet in Kansas City.
    - These would be regular meetings, open to all members and guests.

New Business:

- Tim-Felix shared an update on the draft of IEC 61857-41 that was meant to informative for the working group.
    - He showed a flowchart that the 61857-41 project team had developed that described the steps for insulation system testing.
        - Given that the testing was meant to be for insulation systems, no transformer-specific tests were to be performed.
    - Dave pointed out that one of the problems with IEEE 259 had been setting a correlation time, with C57.12.60 using 40,000 hours and many LV system tests using 20,000 hours.
        - Tim-Felix pointed out that the 61857-41 plan was meant to be generic, and simply refers to the relevant product standard. Dave stated that IEEE 259 would provide some guidance on this matter.
    - Though IEC 61857-41 was developed for voltages of 1000 V and up, the general principles can be applied to the test procedures in IEEE 259.
    - Casey asked how the IEC process could be used to call for a RTI if there was no way in IEC currently to have an insulation system temperature class. There was a short discussion of various IEC standards.
        - Dave stated that the overall point was how this process was similar to IEEE 259, and it was just a way for manufacturers to do the testing.
- Dave discussed the general timing he foresaw for this standard. With the monthly meetings, he hoped to be able to have a finished draft and could vote to go to the Subcommittee at the meeting in Kansas City this fall.
    - It would be likely that the PAR would need to be revised before then.
    - Furthermore, C57.12.60 would probably reopen in ~2025 (according to Casey Ballard), so perhaps IEEE 259 and C57.12.60 could align.
- There were questions regarding the connections between IEEE 259 and UL 1446.
    - Manish Saraf asked about the differences between this method and that of UL 1446.
    - Colby pointed out that IEEE 259 must somehow connect to UL 1446, because NEMA ST 20 only references UL 1446.

- Dave stated that that would be determined later.

The date of the next meeting for the whole Working Group was not explicitly announced but would be planned to take place before the Fall meeting in Kansas City.

The meeting was adjourned at 4:17 PM.

ATTENDANCE

Role	First Name	Last Name	Affiliation
Member	Robert	Ballard	DuPont
Member	Piotr	Blaszczyk	Specialty Transformer Components, LLC
Guest	Lorin	Bratu	Trench
Guest	Camilo	Casallas	Trench Limited
Member	Solomon	Chiang	The Gund Company
Guest	Fernando	Duarte	EPRI
Guest	Rob	Ghosh	GE
Guest	Rafael	Grajeda	Eaton
Guest	Saif	Hossain	Trench Limited
Guest	Ken	Klein	Johnson Electric
Guest	Jason	Lambert	JST
Member	Moonhee	Lee	Hammond Power Solutions
Member	Alexandr	Levin	Weidmann Electrical Technology
Member	Colby	Lovins	Federal Pacific
Guest	Kushal	Mahajan	Eaton
Member	Tim-Felix	Mai	Siemens Energy
Guest	Ken	McKinney	UL Solutions
Guest	Amin	Mihir	Eaton
Guest	Andre	Moreno	Siemens Energy
Member	Aniruddha	Narawane	Eaton Corporation
Guest	Shawn	Nunn	Hitachi Energy
Guest	Tommy	Nunn	JST
Guest	Vinay	Patel	Con Edison
Guest	Caroline	Petersen	Xcel Energy
Guest	Miguel	Plascencia	PG&E
Guest	Klaus	Pointer	Trench Austria
Guest	Chris	Powell	Intermountain Electronics
Guest	Fu	Renjie	ERMCO
Guest	Alberto	Sandoval	Eaton
Member	Manish	Saraf	Hammond Power Solutions
Guest	Mike	Sharp	Trench Limited
Guest	Sam	Sharpless	Rimkus
Guest	Muhammad	Sohail	Trench Canada
Guest	Brian	Sonnenberg	ITI
Chair	David	Stankes	3M
Guest	Erik	Tarango	Olsun Electrics
Guest	Val	Tatu	Powersmiths
Secretary	Joseph	Tedesco	Hitachi Energy
Member	Vijay	Tendulkar	Power Distribution, Inc. (PDI)