

ASTM Committee D27

Electrical Insulating Liquids and Gases

Liaison Report

Thomas Prevost

IEEE/PES Transformers Committee

October 17, 2022

Charlotte, N. Carolina

AGENDA

Introduction to ASTM D27

Current Hot Topics

Future Meetings

Committee D27 on Electrical Insulating Liquids and Gases

ASTM Committee D27 on Electrical Insulating Liquids and Gases was formed in 1959. D27 meets twice each year, in November and May, with about 30 members participating in 12 meetings over two days. The Committee, with a membership of approximately 90 members, currently has jurisdiction of over 60 approved standards that are published in the Annual Book of ASTM Standards, Volume 10.03

D27 Committee Scope

The promotion of knowledge pertaining to electrical insulating liquids and gases, whether of synthetic or natural origin, and the recommendation of standards pertinent to these materials.

The principal materials included in this scope are oils of petroleum origin, synthetic liquids, halogenated and other gases, when used, singularly or as combinations, as electrical insulation or as an environment for electrical insulation.

Standards peculiar to solid insulating materials and varnishes and the development of standards pertaining to the nonelectrical uses of liquid and gaseous materials are excluded from the scope of Committee D27. Development in these fields incidental to the normal work of Committee D27 will be coordinated with the appropriate technical committees of the Society.

Committee Officers

Chairman:	Lance R. Lewand
Vice-chairman:	Edward W. Casserly
Secretary:	Michael Bonn
Staff manager:	Kelly Paul
Admin assistant:	Lindsey Limone
Editor:	Christine Leinweber

Subcommittees

D27.01 Mineral

D27.02 Gases and Non-Mineral Oil Liquids

D27.03 Analytical Tests

D27.05 Electrical Test

D27.06 Chemical Test

D27.07 Physical Test

D27.15 Planning Resource and Development

D27.90 Executive

D27.91 I.E.C. TC 10 and Advisory

D27.95 Awards, Special Events, and Bylaws.

ASTM D27 Hot Topics

Last meeting: May, 17-18 2022 Seattle, Washington Hybrid in-Person/Virtual

Subcommittee Reports

D27.01 - Mineral Oils, Jimmy Rasco:

- The new standard specification for rerefined mineral insulating oil (WK31231) in ballot resolution. Will be reballoted due to persuasive negatives.
- Remains in ballot process.

D27.02 - Gases and Non-Mineral Oil Liquids, Denis Lafrance:

ASTM D27 Hot Topics

D27.03 - Analytical Tests, Claude Beauchemin:

New Standard and Reinstatement Work Items (Not Currently on Ballot) o WK81449 New Standard For the determination of additives in insulating liquids - Part 1 - Determination of phenolic antioxidants using liquid chromatography (LC)
(Technical Contact: Casserly, Edward W)

Work is on-going under the leadership of Ed Casserly. Part 1 is on the determination of phenolic antioxidants using liquid chromatography (LC) and a draft has been issued. There is ongoing discussion concerning the type of solvent to use, Joint effort with IEC is considered and an IEEE paper on the method is planned.

ASTM D27 Hot Topics

D27.05 - Electrical Tests, Sandra Smith:

D27.06 - Chemical Tests, Lance Lewand:

- Item 1. Reapproval of D2440-2013 Test Method for Oxidation Stability of Mineral Insulating Oil WK78150

D27.07 - Physical Tests, William Hand:

D27.95 - Awards, Special Events, Bylaws, Janet Loyd

- Jocelyn Jalbert received award of Appreciation

ASTM D27 Hot Topics

D27.15 - Planning, Resources and Development, Kevin Rapp:

Task Group Reports

- a) WK68133 – Oxidation Stability of Natural and Synthetic Ester Liquids using OIT by DSC – submitted for development to D27.06 SC. Current draft to be posted to collaboration site is v11.
- b) Oxidation of Natural Ester Liquids using Non-DSC Methods – L. Lewand Working on use of D2112 to assess. No updates.
- c) Partial Discharge – Tom Prevost – No report as Tom was not present.
- d) Relative Saturation of Water in Insulating Liquids – Lance Lewand – Status unchanged and no updates.

D27.91 - IEC TC 10 Advisory, Kevin Rapp:

Kevin Rapp presented the IEC TC 10 Advisory report.

Future Meetings

Sunday October 30, 2022 – Tuesday November 1, 2022

Location: Sheraton New Orleans, New Orleans LA

Sunday May 7, 2023 – Tuesday May 9, 2023

Location: Sheraton Denver Downtown Hotel, Denver CO

Monday Nov 6, 2023-Wednesday Nov 8, 2023

Location: Washington Hilton, 1919 Connecticut Avenue Northwest, Washington DC