

IEEE Liaison Report

THANK YOU!





IEC Liaison Report

TC 14 Power Transformers

Chair: Christoph Ploetner, DE / Secretary: Stephany Lavy, UK

TC 10 Fluids for electrotechnical applications

Chair: Ivanka Hoehlein-Atanasova, DE / Secretary: Riccardo Maina, IT

TC 15 Solid electrical insulating materials

Chair: Lars Schmidt, DE / Secretary: Solomon Chiang, US

IEEE Transformers Committee Meeting
2025 March, Denver, CO, US



IEEE Transformers Subcommittee

IEC Technical Subcommittee

IEEE Transformers Subcommittee

IEC Technical Committee

- | | |
|---|--------------------|
| 1. Bushings (Scott Digby)..... | SC 36A |
| 2. Dielectric Tests (Poorvi Patel)..... | TC 14 |
| 3. Distribution Transformers (Jerry Murphy)..... | TC 14 |
| 4. Dry Type Transformers (David Walker)..... | TC 14 |
| 5. Transformers and Reactors for HVDC Applications (Klaus Pointner) | TC 14 |
| 6. Instrument Transformers (David Wallace)..... | TC 38 |
| 7. Insulating Fluids (Stephanye Mabrey)..... | TC 10 |
| 8. Insulation Life (Sam Sharpless)..... | TC 14 TC 15 TC 112 |
| 9. Performance Characteristics (Sanjib Som)..... | TC 14 |
| 10. Power Transformers (Ryan Musgrove)..... | TC 14 |
| 11. Standards (Dan Sauer)..... | TC 14 |
| 12. Subsurface Transformers & Network Protectors (Clemens Reiss)..... | TC 14 |



TC 14 General Information – Chris Ploetner

- Membership countries 52 (+3)
- Active experts 276
- Currently active MT, PT, WG, AG, AHG 10 + 3 joint groups
- Documents in charge of (TR, TS, IS) 40
- Documents under maintenance / in development 13 / 0
- **IEC/IEEE dual logo documents 6 (4 out of 6 in revision)**
- No documents published since last report
- Past Plenary Meetings
 - **2024, October 21st in Edinburgh (UK)**
- Next Plenary Meetings
 - **2025, Sept. 10th / 11th in New Delhi (India) // 2026, Sept. in Hamburg (DE)**



Revision of TC 14 documents in progress (12)

1. IEC 60076-1 General – CDV to be published in Q4
2. IEC 60076-2 Thermal performance measurement and test procedures for liquid-immersed transformers – CDV to be published in Q4
3. IEC 60076-4 Lightning impulse and switching impulse tests of power transformers and reactors – FDIS to be published in Q2
4. IEC 60076-5 Ability to withstand short circuit – CDV to be published in Q2
5. IEC 60076-6 Reactors – CDV to be published in Q2
6. IEC 60076-9 Terminal and tapping markings – CD in Q2 expected
7. IEC 60076-18 Measurement of frequency response – work in progress
8. IEC 60076-19-2 Uncertainties in the measurement of reactor losses – CD in Q4
9. IEC 62032 / IEEE C57.135 Technical guideline for the Application, Specification, and Testing of Phase-Shifting Transformers
>> to become IEC/IEEE 60076-57-135 – work ongoing
10. IEC/IEEE 60076-57-1202 Liquid-immersed phase-shifting transformers ----“----
11. IEC/IEEE 60076-57-129 HVDC Converter Transformers – WG meets Thu / Fri
12. IEC 60076-21 / IEEE C57.15 Step-voltage regulators – WG meets on Thursday
13. IEC 60076-26 Functional requirements of insulating liquids for use in power transformers (jointly with TC 10) – work ongoing

IEEE / IEC
Chair / Convener

E. Schweiger /
K. Juchem

W. Ziomek /
F. Trautmann

D. Sauer /
D. Sauer



TC 10 General Information – Ed Casserly

- **42** Member countries; **8** Active MT, PT, WG, AG, JMT; **214** Experts
- **63** Documents under supervision; **7** Documents in revision / development
- **4 Document published since last report (1 at FDIS stage):**
 - IEC 60156:2025 IEC 61039:2025
 - IEC 62770:2024 IEC 63360:2025
- Last plenary meeting, 2024 April 18/19 Rome (IT) – jointly with TC 14
 - Hybrid meeting – 84 participants (48 in-person) - 4 USNC TAG members
- **Next plenary meeting, Sept. 10-11, 2025 New Delhi (India)** – jointly with TC 14
 - Hybrid meeting



TC 10 Standards Currently Under Revision

For details see TC 10 webpage

- MT24 (Ivanka Höhlelein-Atanasova, DE)
 - **In maintenance** – 61619 ED2: Insulating liquids - Contamination by polychlorinated biphenyls (PCBs) - Method of determination by capillary column gas chromatography (Riccardo Maina, IT)
 - **In maintenance** – 61198 ED2: Mineral insulating oils - Methods for the **determination of 2-furfural** and related compounds (Riccardo Maina, IT)
 - **In maintenance** – 60814 ED2: Insulating liquids - Oil-impregnated paper and pressboard - Determination of water by automatic coulometric Karl Fischer titration (Senja Leivo, FI)
- MT30 (Massimo Pompili, IT)
 - **In maintenance** – 60897 ED2: Methods for the determination of the lightning breakdown voltage of insulating liquids
- MT36 (Attila Györe, HU)
 - **FDIS - 61203 ED2: Synthetic organic esters - Guide** for maintenance of transformer esters
 - **In maintenance** – 61099 ED3: Insulating liquids - Specifications for unused synthetic organic esters for electrical purposes



TC 10 Standards Currently Under Revision

For details see TC 10 webpage

- MT43 (Griffin Burk, US)
 - **CD** - 60666 ED3: Detection and determination of specified **additives in mineral insulating oils**
- WG41 (Yannick Kieffel, FR)
 - **CDV** – 63359 ED1: Fluids for electrotechnical application: Specifications for the re-use of mixtures of gases alternative to SF₆
- WG45 (Ivanka Höhlelein-Atanasova, DE)
 - **CDV** - 63585 ED1: Interpretation of **DGA analysis in natural and synthetic esters**



Partially concurrent
with ASTM D27.03

New TC 10 Standard in Development

- WG46 (Yihua Qian, CN)
 - **Retro-filling** mineral oil immersed transformers **with alternative insulating liquids**



TC 15 General Information – Solomon Chiang

Scope: Solid electrical insulating materials incl. coatings and varnishes

- **39** Member countries (20 P members); **10** MT, PT, WG; **92** Experts dealing with
 - plastic films, combined flexible materials, mica products, pressboard and related material, cellulosic paper products, flexible insulating sleeving, rigid fibrous reinforced laminates, resins and varnishes
- **231 Publications --- 22 active projects** (revision/development)
- **12 Documents published since 2023** – for details see TC 15 webpage
- **Last plenary meeting, Nov 11 - 14, 2024, Vienna, Austria**
 - In Person Meeting – 26 participants - **2 USNC TAG representatives**
- **Next in-person plenary meeting, October 20 - 23, Tokyo, Japan**



TC 15 Projects of interest to the IEEE Transformers Committee

MT 14 – **Pressboard** and related material – IEC 60641-x-y documents

MT 15 – **Cellulosic paper products** – IEC 60554-x-y documents

Due to common characteristics of **Pressboard** and **cellulosic paper products**, TC 15 is considering merging MT-14 and MT-15 – given the decision a 2-year time frame

New document in development

IEC 60554-3-6 – Specification for cellulosic papers for electrical purposes -

Part 3: Specifications for individual materials -

Sheet 6: Presspaper



TC 15 Projects of interest to the IEEE Transformers Committee

TC15 – WG-7 received approval to revise IEC 61033
*This is an old document **requiring an update.***

Project

IEC 61033 ED2

Test methods for the determination of bond strength of impregnating agents to an enameled wire substrate

Detail

Committee	Working Groups	Project Leader	Current Status
TC 15	WG 7	Mr Mark Winkeler	ACD