

20 May 2020

This course is designed for maintenance staff and asset managers responsible for transformer assets.

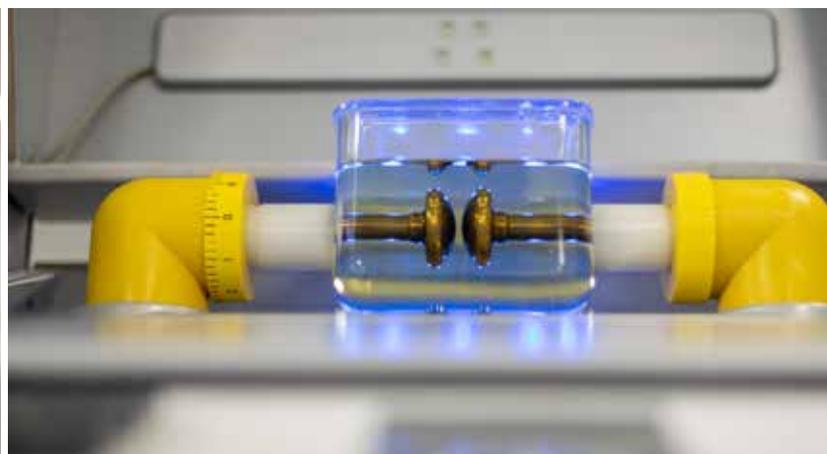
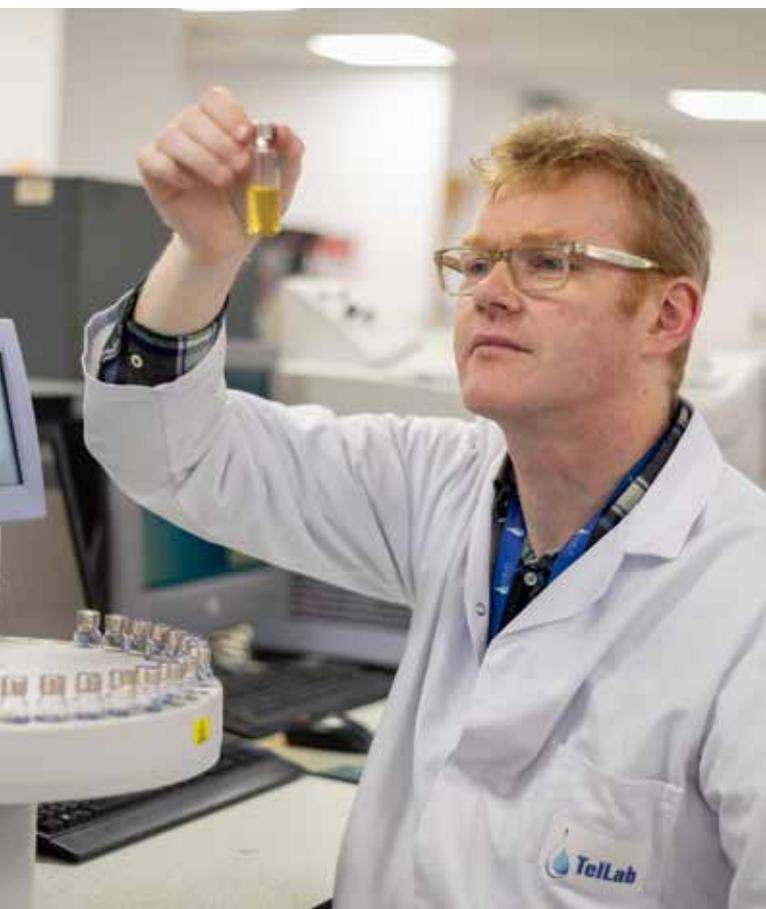
TRANSFORMER OIL ANALYSIS TRAINING COURSE

Condition monitoring through oil analysis is key to maximising the lifetime, reliability and availability of transformer assets. Oil analysis provides critical information about the condition and remaining lifetime of the transformer oil and insulating paper as well as an early warning of internal transformer problems.

This one-day course will enable you to:

- Define and implement a high-quality programme of oil analysis for transformer condition monitoring.
- Interpret the results and understand the timing and nature of any corrective actions required.

This training is brought to you by T.E. Laboratories (TelLab) - Ireland's only specialised, accredited transformer oil analysis laboratory - in partnership with ENGIE Laborelec, a leading Belgian-headquartered training and research centre, with over 50 years' experience in electrical power systems.



TelLab 

Course date: Wednesday 20 May 2020

Venue: T.E Laboratories Ltd, Loughmartin Business Park, Tullow, Co. Carlow. R93 N529, Ireland.

Course content

The morning session of this one-day course is dedicated to helping you understand the reactions that can occur inside a transformer and the various aspects of a condition monitoring programme. We cover the

- Structure and function of a mineral oil and additives
- Alternative insulating fluids, such as silicon oils and natural or synthetic esters
- Ageing and degradation mechanisms for the oil and paper
- How to avoid/minimise water contamination/formation; oxidation and gas formation
- Various tests to carry out before start up and when in service - for different transformer types - and recommended testing frequency
- How to interpret your results through trending, comparison with international standards, etc.
- Understanding what course of action may be required - from further monitoring; oil treatment (dehydration, use of additives, oil replacement) or internal transformer inspection - right through to taking the transformer out of service.

Laboratory visit and case studies

In the afternoon, there will be a tour of TelLab's transformer oil analysis laboratory. In addition, we will work through a number of practical, hands-on case studies to show you how to interpret results and determine follow-on actions.

Duration

One day: 20 May 2020

Venue

T.E Laboratories Ltd, Loughmartin Business Park, Tullow, Co. Carlow.

Costs

€975.00 per person ex VAT, including all course notes, teas/coffees and lunch.

Early-bird fee: €850.00 if booked and paid in advance of 27 March, 2020.

Group discounts available:

3 or more attendees 10% discount.

TelLab

Founded in 1991, T.E. Laboratories (TelLab) has deep expertise in chemical analysis. We are Ireland's only specialised transformer oil analysis laboratory, with a track record of over 20 years, performing analysis for the majority of Irish power generators and many large-scale electricity users. Our environmental laboratory facilities are INAB accredited, and we operate to ISO 9001 standards.

Training Coordinator

Kevin Deville has been responsible for the condition monitoring of industrial transformers at Laborelec for the past 10 years. Over this time, he has provided extensive training and consultancy internationally. Prior to this, between 2007 and 2009, he specialised in dissolved gas, furanic compound and PCB analyses in Laborelec's transformer laboratory. He holds a Bachelor's Degree in Chemistry, as well as specialist qualifications in sampling and analysis.



Learn how oil analysis can provide vital information on

Transformer Internal Condition

- By measuring
- Dissolved gases
 - Dissolved metals

Paper Condition

- By measuring
- Furans content
 - Methanol content

Corrosive Sulphur Risk

- By measuring
- DBDS
 - Metal passivator

Oil Quality

- By measuring
- Water content/relative humidity
 - Acidity
 - Breakdown voltage
 - Dielectric losses
 - Resistivity
 - Presence of additives
 - Interfacial tension
 - Oil density, colour and appearance
 - Particle count
 - PCB content



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