

IEEE Malaysia Section Newsletter

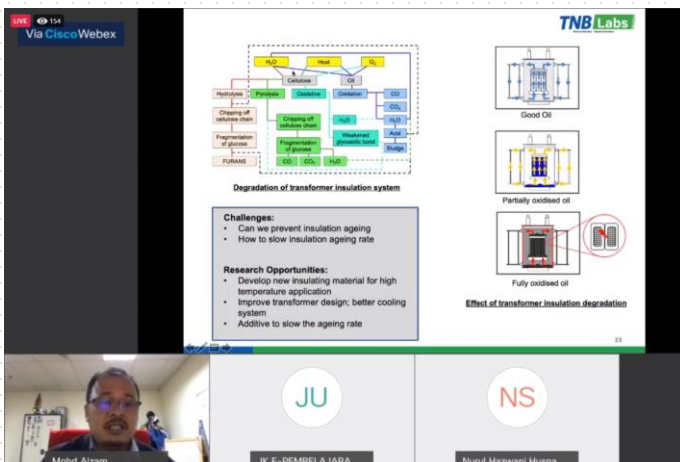
IEEE Dielectrics and Electrical Insulation Society (DEIS)

Reported by Ts. Dr. Wong Jee Keen Raymond (wjkraymond@um.edu.my)

Webinar on Insulating Oil Analysis of In-service Power Transformer

The IEEE Dielectrics and Electrical Insulation Society (DEIS) Malaysia Chapter collaborated with TNBR Labs to organize a Webinar entitled “Insulating Oil Analysis of In-service Power Transformer”. The talk was held online via Cisco Webex and was attended by around 120 participants.

During the talk, Ir. Ts. Dr. Mohd Aizam Talik (Head of Advanced Diagnostic Services TNBR) explained about the significance of transformer oil analysis, the oil sampling process, oil quality analysis, dissolved gas analysis (DGA) as well as Furan Analysis.



The slide illustrates the degradation of transformer insulation system. It includes a flowchart showing the process from 'Insulation' to 'Degradation' through various stages like 'Thermal', 'Electrical', and 'Mechanical'. Below the flowchart, there are three diagrams showing the effect of transformer insulation degradation: 'Good Oil', 'Partially oxidized oil', and 'Fully oxidized oil'. The slide also lists 'Challenges' and 'Research Opportunities'.

Challenges:

- Can we prevent insulation ageing
- How to slow insulation ageing rate

Research Opportunities:

- Develop new insulating material for high temperature application
- Improve transformer design; better cooling system
- Additive to slow the ageing rate



The poster features the TNB Labs logo and the IEEE DEIS logo. It includes the text 'FREE LIVE WEBINAR' and 'A Series of Webinar by TNB Labs'. The main title is 'INSULATING OIL ANALYSIS OF IN-SERVICE POWER TRANSFORMER'. The event is scheduled for '10.00AM-11.00AM' on '23 APRIL 2021 (FRIDAY)'. The background image shows a person in a white hard hat and safety vest working on a transformer.

Webinar on Condition Assessment of Power Transformer by Electrical Diagnostic Testing

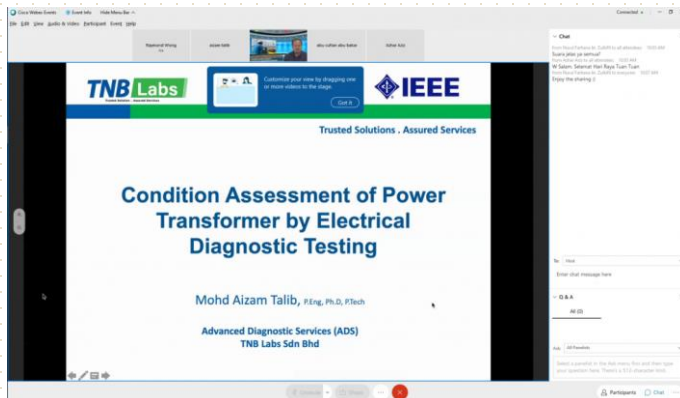
The IEEE Dielectrics and Electrical Insulation Society (DEIS) Malaysia Chapter collaborated with TNBR Labs to organize a Webinar entitled “Condition Assessment of Power Transformer by Electrical Diagnostic Testing”. The talk was held online via Cisco WebEx and was attended by around 100 participants.

In this talk, Ir. Ts. Dr. Mohd Aizam Talik (Head of Advanced Diagnostic Services TNBR) started with a quick introduction of power transformer components and detectable faults. Next, he explained about the basic routine electrical testing and the more advanced electrical testing such as Frequency Response Analysis, Dielectric Response and Partial Discharge. He also explained about OLTC advance diagnostic testing using dynamic resistance and vibro-acoustic measurement.

Webinar on Transformer: Application, Research & Opportunities

The IEEE Dielectrics and Electrical Insulation Society (DEIS) Malaysia Chapter collaborated with FKE UTm and TNBR Labs to organize a Webinar entitled “Transformer: Application, Research & Opportunities”. The talk was held online via Cisco Webex and was attended by around 150 participants.

During the talk, Ir. Ts. Dr. Mohd Aizam Talik (Head of Advanced Diagnostic Services TNBR) started by explaining the basics of power transformer and why it is needed in various fields. Next, he explained the challenges faced in transformer operation and discussed the potential research opportunities that can be done. Among the research opportunities suggested were, ageing assessment using data analytic for effective asset management, developing new insulation oil type using palm oil, develop new insulation material, develop a new sensor to detect corrosion, DGA interpretation using AI, modelling and processing of FRA response, PD classification using AI and improve PD sensitivity and interpretation.



The slide features the TNB Labs logo and the IEEE logo. It includes the text 'Trusted Solutions . Assured Services'. The main title is 'Condition Assessment of Power Transformer by Electrical Diagnostic Testing'. The speaker is 'Mohd Aizam Talik, P.Eng, Ph.D, P.Eng' from 'Advanced Diagnostic Services (ADS) TNB Labs Sdn Bhd'. The background image shows a person in a white hard hat and safety vest working on a transformer.