

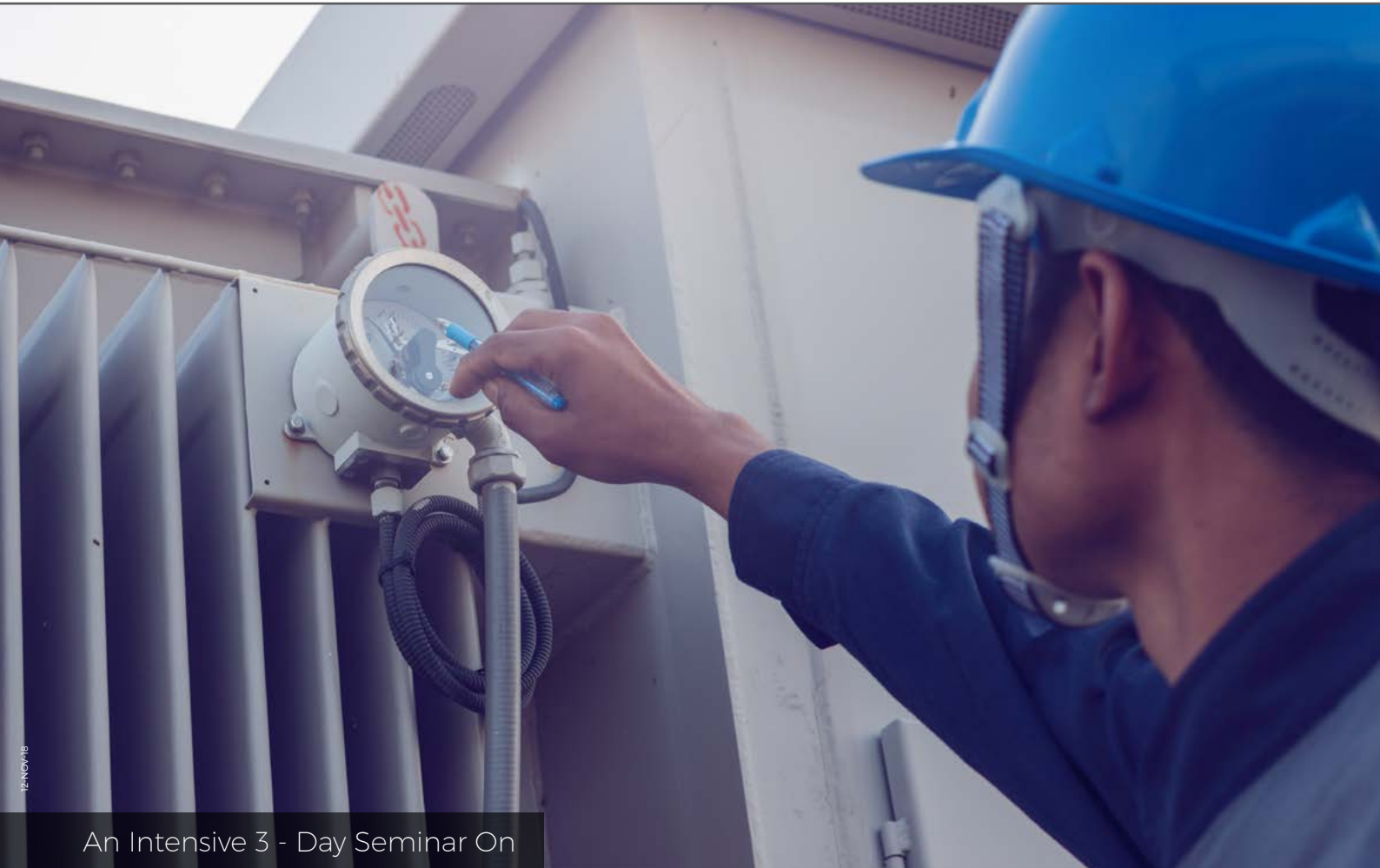
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Training Seminars & Conferences
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12-NOV-18

An Intensive 3 - Day Seminar On

Dissolved Gas Analysis (DGA) of Transformers and Oil-Filled Cables

08 - 10 Sep 2019, **Dubai**

EuroMaTech is proud to be associated with the following accreditation bodies:



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INTRODUCTION

Dissolved Gas Analysis (DGA), initially developed for the monitoring of transformers, was recently introduced for in-service diagnostics of power cables. Criteria successfully developed for transformers are not readily applicable to cables because of significant differences in the design and operating characteristics of both systems. The diagnostic of a given cable circuit is based on the voltage rating, the individual gas concentration levels, the key gas ratios, the gas formation trends, the years in service, and the load. A new graphical representation of the IEC 599 method for the interpretation of gas ratios was developed in view of its application to power cable diagnostics. This new method, also applicable to transformers, solves most of the undetermined diagnostics given by the IEC method. The whole DGA diagnostic procedure logic is coded in an expert system shell automating the final diagnostic on the condition of the cable insulation. The IEC 60599 is pertaining to dissolve gas analysis on mineral oil in oil impregnated electrical equipment.

EuroMaTech's Dissolved Gas Analysis training course is intended to familiarize the participants with the components of the distribution and transformer systems, and the way in which the system delivers power to customers. Included in the course are descriptions of key system components including single and three phase lines as well as wye and delta lines. The course also address ways the state of the art dissolve gas analysis for transformers available today, it will also include the non-mineral oil filled transformers. All tests related to Dissolved Gas Analysis (DGA) of Transformers and Oil-Filled Cables will be covered in this training course with reference to IEC 60599.

Delegates attending EuroMaTech's Dissolved Gas Analysis training course will develop the following competencies:

- Understand the importance of oil filled power transformers
- Awareness of the characteristics of mineral oil in transformers
- Comprehend dissolved gas analysis for transformer
- Exposed to the construction of oil filled cables
- Determine dissolve gas analysis for the oil filled cables

WHO SHOULD ATTEND?

EuroMaTech's Dissolved Gas Analysis training course is suitable to a wide range of professionals but will greatly benefit:

- Electrical engineers
- Maintenance technicians
- Management professionals
- Project engineers

PROGRAMME OBJECTIVES

EuroMaTech's Dissolved Gas Analysis training course aims to assist delegates to achieve the following objectives:

- Define the roles and components of a power transformer
- Definition and abbreviations on DGA with reference to IEC 60599
- To appreciate the merits transformer oil functionalities
- Identify the components of the oil filled transformer
- Understand the functionalities and purpose of dissolve gas analysis with reference to IEC 65099
- Competence to identify the oil filled cables
- Perform the dissolve gas analysis for oil filled cables
- Explore the online dissolve gas analysis merits and significance

TRAINING METHODOLOGY

The goals of each participant attending EuroMaTech's Dissolved Gas Analysis training course are discussed to ensure their needs are fulfilled, as far as possible. Questions are encouraged throughout, particularly at the daily wrap up sessions. This provides opportunities for participants to discuss specific issues and, if possible, find appropriate solutions. Case studies are employed to highlight particular points and appropriate video materials used to illustrate particular conditions.

PROGRAMME SUMMARY

This unique EuroMaTech training course on Dissolved Gas Analysis will expose the various topologies to the delegates. Upon completion of the course delegates will improve the maintenance strategies of their existing oil filled equipment, hence will optimize the operations of the transformers and oil filled cables.

PROGRAMME OUTLINE

DAY 01

FUNDAMENTALS OIL FILLED POWER TRANSFORMERS AND MAJOR COMPONENTS

- Construction of a power transformer
- On load tap changer characteristics
- Duval's triangle and its significance with reference to IEC 65099
- The bath tub curve and its relevance
- Transformer oil characteristics
- Non-mineral transformer oil characteristics

DAY 02

DISSOLVED GAS ANALYSIS FOR TRANSFORMER WITH REFERENCE TO IEC 65099

- Purpose and significance of dissolved gas analysis in an oil filled transformer
- Mechanism of gas formation
- Interpreting dissolve gas analysis data with reference to IEC 65099
- Procedures conducting dissolve gas analysis
- DGA investigations for contents
- Online dissolved gas analysis

DAY 03

CHARACTERISTICS AND FUNCTIONALITIES OF DISSOLVED GAS ANALYSIS FOR OIL FILED CABLES

- Types of high voltage cables
- Construction of oil filled cables
- Partial discharge in oil filled cables
- Dissolved gas analysis applications on oil filled cables
- Interpreting dissolve gas analysis results for an oil filled cable

In-House Training

EuroMaTech is capable of conducting this training programme exclusively for your delegates. Please e-mail us on inhouse@euromatech.ae for further information and/or to receive a comprehensive proposal.



Dissolved Gas Analysis (DGA) of Transformers and Oil-Filled Cables

✓	DATE	VENUE	FEE(\$)
	08 - 10 Sep 2019	Dubai	US\$3,750

*This fee is inclusive of instruction materials, documentation, lunch, coffee/tea breaks & snack. All Fees are subject to 5% Value Added Tax (VAT).**

YOUR DETAILS

Name (Mr/Ms):

Position: Organisation:

Address:

.....

City / Country:

Telephone / Fax:

METHOD OF PAYMENT

- Please find enclosed a cheque made payable to EuroMaTech
- Please invoice me
- Please invoice my company as follows:

Contact Name:

Company Name:

Address:

SEMINAR DETAILS

Documentation

High Quality material has been prepared by the Seminar Leader for distribution to delegates. In addition a special note pad to facilitate note taking will be provided.

Certificates

A Certificate of Completion will be issued to those who attend & successfully complete the programme.

Schedule

07:30 - 08:30	Welcome
08:30 - 10:15	First Session
10:15 - 10:30	Coffee Break
10:30 - 12:15	Second Session
12:15 - 12:30	Coffee Break
12:30 - 14:00	Third Session
14:00 - 15:00	Lunch
15:00 - 16:00	Open Session

Hotel Accommodation

EuroMaTech has negotiated special rates for a limited number of rooms in the hotel. Early registration will help to secure a room at the reduced rate.

Registration & Payment

Please complete the registration form on this page & return it to us together with your cheque made payable to EuroMaTech.

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EASY WAYS TO REGISTER



Telephone: +971 4 4571800 to provisionally reserve your place.



Fax your completed registration form to: +971 4 4571801



E-mail to us: info@euromatech.ae



Complete & return the booking form with cheque to: EuroMaTech P.O.Box 74693, Dubai - U.A.E.

Cancellation Policy

Request for seminar cancellation must be made in writing & received at EuroMaTech three weeks prior to the seminar date. A U.S.\$250/- processing fee will be charged per delegate for each cancellation. Thereafter, we regret that we are unable to refund any fees due, although in such cases we would be happy to welcome a colleague who would substitute for you.

Disclaimer

EuroMaTech reserves the right to alter the content, location of the Seminar, or the identity of the speakers in case of events beyond our control.

***VAT Announcement:** The Government of UAE have introduced Value Added Tax (VAT) on goods and services from 01-January-2018. In compliance with the legislation issued by the UAE Government, we will be applying a 5% VAT on the fees for all our programs and services offered from January 2018 as applicable and stipulated in the FTA circulars.