



Training Seminars & Conferences

An Intensive 5-Day Training Seminar On

LV, MV and HV Circuit Breakers

Selection, Application, Operation and Maintenance

16 - 20 May 2021, Dubai
26 - 30 Sep 2021, Dubai



LV, MV and HV Circuit Breakers

Selection, Application, Operation and Maintenance

INTRODUCTION

This highly participative EuroMaTech training course is designed to provide you with the skills to understand how circuit breakers are selected for specific applications, and how they are designed, installed and safely operated in industrial process plants, particularly in the oil and gas, mining and minerals processing and heavy industries.

The LV, MV and HV Circuit Breakers training course is interactive and encourages delegates to participate through questions and answers, along with opportunities to discuss with the presenter specific issues which may result in appropriate solutions.

Participants will develop following competencies by understanding:

- Practical circuit breaker design and Operation to ensure safe and reliable application
- The differences between circuit breakers and other circuit control and isolation devices
- The different types of circuit breaker used for LV, MV and HV applications
- Circuit breaker operation incorporating current transformer, potential transformer and relays
- Circuit Breaker verses current limiting fuse
- Time current characteristics of a circuit breaker operation
- Typical switchroom, substation and switchyard circuit breaker layouts
- The installation, commissioning and testing of circuit breakers
- The arc quenching methods of circuit breakers
- The state-of-the-art hybrid circuit breakers

WHO SHOULD ATTEND?

If you work in the Utilities, Oil and Gas, Minerals Processing, Mining and Heavy Industries, this LV, MV and HV Circuit Breakers training course will provide you with a detailed understanding of the critical role that the correct selection and installation play in the operation and maintenance of LV, MV and HV Circuit Breakers.

It is specifically tailored to suit:

- Senior / Lead / Principal Electrical Engineers
- Electrical Design Engineers
- Project Managers and Engineers working on Electrical Power Distribution and Generation Projects
- Electrical Construction and Commissioning Engineers and Technicians

- Electrical, Operations and Plant Maintenance Managers and Support Engineers
- Electrical Maintenance Supervisors and Lead Technicians
- Experienced Maintenance and Electrical Technicians

PROGRAMME OBJECTIVES

LV, MV and HV Circuit Breakers training course aims to enable participants to achieve the following objectives:

- Understand the application and importance of circuit breakers
- Learn how different types and voltages of circuit breakers operation
- Understand the fundamental safety requirements for personnel and equipment
- Learn about different types of electrical distribution systems and how they are configured
- Learn how circuit breakers and their associated switchboards are installed
- Understand the basic requirements for safe and reliable operation
- Discover the type of circuit breaker installed in the gas insulated switchgear
- The importance of the maintenance of circuit breakers and associated equipment

TRAINING METHODOLOGY

This EuroMaTech training course will combine presentations with interactive practical exercises, supported by video materials, activities and case studies. Delegates will be encouraged to participate actively in relating their particular protection requirements at their workplace.

There will be adequate time given for group discussion during and at the end of each session, including detailed case studies and anecdotes on based on the subject matter and the facilitator's own experience in the field.

PROGRAMME SUMMARY

LV, MV and HV Circuit Breakers training course covers many details that relate to Circuit Breakers and Switchboard / Switchyard Design and Installation, from basic principles to the complex application of this equipment in large plants and facilities, including their Operation, Maintenance and Fault Finding.

It is designed to be beneficial for professionals with an electrical background who require a detailed understanding of Circuit Breakers and Switchgear for their work or project execution.

PROGRAM OUTLINE

DAY 01

Fundamentals of Circuit Breakers

- A brief history of circuit breakers and their development
- Fundamentals of circuit breaker operation
- Types of LV, MV and HV circuit breakers
- Circuit breakers and substation designs
- Circuit breaker verses current limiting fuses
- Switchgear Symbols in Single Line Drawings

DAY 02

The Construction, Application, Control and Protection of Circuit Breakers

- Circuit breaker arc quenching characteristics
- Circuit breakers for overcurrent protection
- Types of electrical faults and circuit breaker operation
- Current limiting fuses
- Instrument transformers and protection relays
- Time current curves for circuit breakers

DAY 03

Types of Circuit Breakers for LV, MV and HV Systems

- Operation and construction of miniature circuit breaker
- Operation and construction of molded case circuit breaker
- Operation and construction of air circuit breaker
- Operation and construction of SF6 circuit breaker
- Operation and construction of vacuum circuit breaker
- Operation and construction of state-of-the-art hybrid circuit breaker

DAY 04

Circuit Breaker Maintenance in Switchboards and Switchyards

- Maintenance strategies
- Condition based maintenance for outdoor circuit breaker
- Live tank circuit breaker
- Dead tank circuit breaker
- SF6 circuit breaker maintenance and tests
- Gas insulated switchgear and substation

DAY 05

The Installation, Commissioning, Maintenance and Fault-Finding Requirements for Safe and Reliable Operation

- Green grid gas and greenhouse gas
- Circuit breaker routine tests
- Testing and commissioning of circuit breakers
- The LSIG modes of circuit breaker safe operations
- Common circuit breaker faults

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.

QUALITY CERTIFICATIONS & ACCREDITATIONS

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



The PMI® Registered Education Provider logo is a registered mark of the Project Management Institute, Inc.

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✓	Date	Venue	Fee(\$)
	16 - 20 May 2021	Dubai	US\$4,950
	26 - 30 Sep 2021	Dubai	US\$4,950

*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:

Mode 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:.....

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

Our Course timings commences at 08:30 and concludes at 14:00, followed by lunch on a daily basis.

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 indicating your preferred mode of payment. For Further Information, Contact Your Nearest EuroMaTech Office.

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.

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