Training Title
VARIABLE SPEED DRIVES

Training Duration
5 days

Training Venue and Dates

REF EE102	VARIABLE SPEED DRIVES	5 days	03 – 04 March, 2024	$6,500	London, UK

In the below 5 star hotel as mentioned. The exact venue will be informed once finalized.

1. **Events at Marble Arch**

Central Cluster Meetings, Events and Group Sales - The Cumberland Hotel and Thistle M arble Arch

T. +44 (0) 207 523 5060

W. clermonthotel.group | A. Thistle Marble Arch, Bryanston St, Marylebone, London, W1H 7EH

Training Fees
$6,500 per participant for Public Training including Course Materials/Handouts, Tea/Coffee, Refreshments & International Buffet Lunch

Training Certificate
Define Management Consultancy & Training Certificate of course completion will be issued to all attendees.

TRAINING OVERVIEW
COURSE OBJECTIVES
This course is designed to the participants:

- To understand the basic of VSD.
- To understand the basics of converter.
- To understand the basics of inverters.
- To understand the installation, troubleshooting, commissioning and troubleshooting.
- To understand the needs of variable speed drives.
- Match the speed of the drives to process speed requirements.
- To Match the torque of a drive to the process torque requirement.
- To save energy and improve efficiency

WHO SHOULD ATTEND?

Electricians, technicians and engineers with an interest in operation and installation and troubleshoot of variable speed drives.

TRAINING METHODOLOGY:

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions, and motivate everybody find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course.

All presentations are made in excellent colorful power point. Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work& Practical Exercises
- 20% Videos& General Discussions

COURSE OUTLINES

- Introduction to induction motors its theory .
- AC motor speed control
- Stator voltage control
- Frequency control
- Rotor resistances control
- Pole changes
- AC TO DC converters.
- DC TO DC converters.
- DC TO AC converters or inverters.
- Cyclo converter
- Power electronic components.
- Electronic switch
- Power diodes and thyristos.
- Fields controlled thyristors FCT.
- Power bipolar junction transistor BJT AND IJBT.
- Main components of various types of vsd.
- Single phase pulse width modulation(pwm) inverter.
- •Variation of frequency and voltage with sinusoida   pwm.
- Three phase inverter.
- VSD over hall protection and diagnostics.
- Parameters and fault diagnostics.

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- VSD protection.
- DE-RATING for high temperature and high altitude.
- General safety recommendation.
- POWER SUPPLY CABLE.
- Cables between converter and motor.
- Control cable.
- Earthing requirements.
- Precaution for start/stop of AC drivers.
- Remote operation of vsd.
- Commissioning of vsd& purpose of commissioning.
- Maximum speed.
- Minimum speed.
- Current limit.
- Rated current of the motor.
- Acceleration Time.
- Deceleration Time.
- Starting Torque Boost.
- Harmonic and effect on net work ,electric equipment .
- Circulating current and its effect on motor bearing.
- Capacitive discharge current.
- Speed measurement transducer.

NOTE:
Pre & Post Tests will be conducted.
Case Studies, Group Exercises, Group Discussions, Last Day Review &Assessments will be carried out.

MEETING ROOM PICTURES:

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