



THE INSTITUTE OF MARINE ENGINEERS (INDIA) Mumbai Branch

Electrical, Automation & Control Course Practical Demonstration of Most Concepts

Course Starts 25th to 27th May, 2026

FACULTY: Mr. Ajit Kumar K.T., Chief Engineer, MEO 1 , 81-85 D.M.E.T. Kolkatta

TARGET AUDIENCE: Operational Level Engineering Officers

DAY 1 ELECTRICAL

- Usage of Digital Multi Meter
- Demo of AC Fundamentals, Inductance & Capacitance
- Power Generation & Distribution
- 3 Wire 3 Phase, Floating Neutral, & IRM
- 3 Phase brushless Alternators & AVR
- Parallel Running of Alternators, KW & KVAR Sharing
- Voltage & Speed Droops
- ACB
- MSB Safeties
- Demo of 3 Phase AC Induction Motor Fundamentals
- Motor Terminals layout, IR Testing
- Motor Starters
- Demo of VFD
- Demo of all components of Motor Starter Panels
- Electrical Drawings Symbols, Reading same
- Electrical Trouble Shooting based on Electrical Drawings

DAY 2 INSTRUMENTATION

- Analogue & Digital Signals
- Demo of Various Primary Sensors and their outputs
- Demo of Various types of Signal Conditioners and their output
- Demo of 2 wire and 4 wire telemetry
- Demo of Instrument Calibration
- Demo of Data Acquisition SCADA and AD Conversion
- Demo of Ships Alarm Monitoring System
- Demo of Loop Calibration in Source and Simulate Modes
- Alarms and Trips Testing on board
- Demo of Boiler Water Level measurement by DP Transmitter & its Calibration
- BWT Level Gauging System

DAY 3 PROCESS CONTROL & PLC/ HMI

- Introduction to Various Process Control Systems on board
- Demo of Process Control Parameters (SV/PV/MV/Output) captured dynamically on a SCADA Screen Graphically
- Demo of Open Loop Response of a Digital Controller to input changes
- Demo of Proportional, Integral & Derivative Actions
- Demo of Auto Tuning of a PID Digital Controller to a given process
- Demo of 3 - 15 psi diaphragm actuator
- Demo of Pneumatic positioner
- Demo of Digital positioner - SIEMENS SIPART
- Introduction to PLC HMI
- Demo of wiring and programming HMI and PLC

Fees : *Members - Rs. 14500/- + 18 % GST

(IMEI, CMMI and INA Members)*

*Non-Members - Rs. 16500/- + 18% GST

Date : 25th to 27th May 2026

Time: 0900 hrs to 1700 hrs

3 DAYS ONLINE COURSE

Venue : Web Platform / Zoom

Kindly enrol & make payment through <https://linktr.ee/imei.m>
and

After registration please drop email to training_mumbai@imare.in

Contact Person for any queries:-

Kindly contact Ms. Anita Patill : 91-9225516456 / Mr. Suraj Negi : 91-9967481448