

€ TRAINING

Conference : Marine Electrical Maintenance



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Introduction

In short, a marine electrician is responsible for the operation and distribution of power throughout a ship. A marine electrician maintains all onboard electrical systems, installs electrical equipment, and maintains the ships electrical system, and also ensures any onboard emergency or safety systems are operational

Program Objectives

At the end of this program the participants will be able to:

- Shipboard Electrical Safety Work Practices
- Describe marine power distribution systems
- Discuss the performance characteristics of a DC generator
- Electrical Components Testing & Insulation Resistance Testing
- Motor Starters Direct-On-Line, Reversible, and Reduced Voltage Starters
- Fault Finding Techniques:
 - Star Delta Circuit Diagram
 - Group Starter Panel
 - Ship's Motor Starter Drawing
- Circuit Analysis of Main Switchboard
- Westfalia Bilge Master Fault finding

Targeted Audience

- Foreign-going Seafarers: Chief Engineer
- Any engineering personal as nominated by the company for operational role as Marine, Electrical and Control Engineers.

Unit 1:

- Shipboard electrical distribution system
- Fault diagnostic of electrical faults & Maintenance

- Electronic & Automations, control Engineering
- High Voltage and Electric propulsion

Unit 2:

- Operate and configure VARIABLE FREQUENCY DRIVE VFD
- Addressing and testing of the Fire Detection and Alarm System FDAS
- Testing of diodes and capacitor in-circuit and out-circuit
- Testing and switching of transistors

Unit 3:

- Controlling a motor using digital techniques
- Repair and maintenance on RADAR Including replacement of magnetron
- Setting of Pressure Switch Cut-in and Cut-out
- Testing of Solenoid Valves

Unit 4:

- Testing and measurement of I/Os of Programmable Logic Controller
- Fault-finding / Trouble-shooting of a process control system
- Batteries and UPS Maintenance
- Common Control Components

Unit 5:

- Ancillary Equipment: Ships Lighting
- Design of secure ships
- Brushless 3 Phase AC Generator
- Frequency Converter
- Speed Controller
- Fire Detection System

