ABB Marine Academy course description
H870 - LV power distribution system

Course goal
The goal of this course is to train the participants in safe operation, control, configuration and maintenance of ABB LV switchgear MNS, air circuit breakers, molded-case circuit breakers and soft-starters.

Learning objectives
Upon completion of this course, students will be able to locate hardware components, to understand and verify switchgear parts, breaker internal components and components inside cubicles. Students will also be able to perform maintenance, and identify low voltage electrical safety hazards.

Contents
General topics
- Safety procedures while working on the switchboard
- Introduction to ABB Marine Service
- General marine power plant
- Power plant regulation principles

Hardware description
- LV switchboard MNS compartments
- Generators, motors and transformers
- Air circuit breakers, protection releases and accessories
- Molded-case circuit breakers, protection releases and accessories
- Introduction to soft-starters

Operation
- Removal and installation of air circuit breaker
- Manual charging of breaker spring and operation
- Demonstration of use of protection relays PR unit 121/122/123- Racking of module drawers and identifica- tion of various positions of rotary handles on the modules

Methods
Classroom lectures
Demonstration and practical lessons on our training switchgears.

Student profile
Marine engineers and electro-technical personnel at the support, operational and management level

Prerequisites
None

Duration
2 days

Venue
Singapore
Houston

Additional information
Minimum 6, maximum 8 participants
On-site training is available on request

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Course outline

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Day 1

- Introduction
- General marine power plant
- Power plant regulation
- Generators, motors and transformers
- Earth fault simulation exercise

Day 2

- LV switchboard MNS
- Air circuit breakers
- Molded-case circuit breakers
- Soft-starters
- Switchboard hands-on exercise
- Safety equipment handling
- Occupational hazard and safe work procedures
- Case studies