

# ABB Marine Academy course description

## H862 - LNG Electrical propulsion system

### Course goal

The goal of this course is to train the participants to operate and maintain a vessel propulsion control system by using the training simulator, based on vessel configuration.

### Learning objectives

Upon completion of this course, students will be able to understand the function of the electrical propulsion control system and operate the maintenance station.

### Contents

General topics

- Introduction to ABB Marine Services
- Electrical propulsion system overview

Operation

- Navigate the maintenance station
- Local and remote control
- Operational modes and control modes
- Protection functions
- Blackout protection
- Operational limitations
- Start interlocks

Software Introduction

- Control system monitoring
- System structure

Fault-tracing and troubleshooting

- Alarm and event handling

### Methods

This is an instructor-led course with interactive classroom discussions and associated lab exercises. Approximately 50% of the course is comprised of hands-on lab activities.

### Student profile

Marine engineers and electro-technical personnel at operational and management level



### Prerequisites

The participants should have fundamental knowledge of vessel operation and have basic knowledge of Windows XP. Completion of ACS6000 SD/AD marine drive course or similar knowledge is advisable

### Duration

4 days

### Venue

Singapore

### Additional information

Minimum 4, maximum 6 participants  
On-site training is available on request

# H862 - LNG Electrical propulsion system course

## Course outline

---

### Course outline

---

#### Day 1

- Introduction
- Propulsion control system overview
- Maintenance station navigation
- Local and remote control
- Control functions
- Control functions exercises (maneuver mode and sea mode)

#### Day 2

- Control functions exercises (crash stop, braking, master follower)
- Control functions summary
- Equipment protection
- Equipment protection exercises (alarms, power limitation, trip and safety overrides)

#### Day 3

- Blackout protection
- Blackout protection exercises (available power calculations, generator load/trip, network supply frequency, diesel engine power ramps)
- Operational limitations
- Speed and power limitation exercise
- Start interlocks

#### Day 4

- Alarm and event handling
- Propulsion control system components
- Propulsion control system alarm message exercise
- System interface

This course has been certified in accordance with "DNV Standard for Certification of Learning Programmes - 3.201"

