

# ABB Marine Academy course description

## H874 – Marine HV motors and generators

### Course goal

The goal of this course is to learn the concepts, theory, operation, maintenance, trouble shooting and product description and construction of AMI and AMZ motors and AMG generators. The tools and methods learned could be applied to the work in practice.

### Learning objectives

Upon completion of this course the participants would have learnt:

- Concepts, theory, operation and maintenance of motors and generators.
- Features, constructional details, operation and maintenance of the following ABB products:
  - AMI and AMZ motors.
  - AMG Generators.
- Basic troubleshooting knowledge.
- To perform independent maintenance

### Contents

Concepts and Theory (refresher):

- Basic Theory
- AC Theory and Motors
- DC Theory and Motors
- Standards/ Applications:
  - Duty Type
  - Ingress protection
  - International cooling
  - Mounting

Products – AMI and AMZ motors and AMG generator:

- Product description
- Basic Ratings and specifications
- Constructions features and details
- Operation

Troubleshooting and Maintenance:

- Basics of trouble shooting
- Typical problems and guide to their identification
- Planned Maintenance for ABB motors and generators

Diagnostics:

- Techniques, theory and tools used for electrical diagnostics and vibration analysis.

Hands on Skill:

- Hands on practical as indicated in section on course outline.



### Methods

Classroom lecture  
Hands on skill

### Student profile

Marine engineers and electro-technical personnel at the support and operational level. Shoreside technical personnel at operational level.

### Prerequisites

Participants should know the fundamentals of working with motors and generators.

### Duration

3 days

### Venue

Singapore

### Additional information

Maximum 8 participants  
On-site training on request

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## Course outline

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### Course outline

#### Day 1

- Concepts and Theory of Motors and Generators (Refresher)
- Practical Hands on – Understanding the components of Motors and generators
- Product AMI motor

#### Day 2

- Troubleshooting & maintenance
- Diagnostics
- Practical hands on troubleshooting, maintenance and diagnostics

#### Day 3

- Practical hands on troubleshooting, maintenance and diagnostics
- Products AMZ motor and AMG generator