

# ABB Marine Academy course description

## H863 - ACS6000c NTY cyclonverter

### Course goal

The participant will learn how to operate, maintain and troubleshoot the ACS6000c Cycloconverter system. The trainee will also learn how to use the available programming and troubleshooting tools with practical exercises.

### Learning objectives

Upon completion of this course, the participants will be able to:

- Describe the drive system components
- Explain the basic operation principle
- Identify drive components and configure settings
- Operate the drive
- Carry out preventive maintenance
- Perform basic troubleshooting tasks
- Locate and replace faulty hardware components

### Contents

- Introduction to Variable Speed Drives
- System description
- Operation principle
- Control hardware
- Propulsion control system
- Water cooling system
- Operation of the drive (hands-on)
- Shaft encoder synchronization (hands-on)
- Phase test (hands-on)
- Thyristor replacement (hands-on)
- Software tool DriveWindow (hands-on)
- Preventive maintenance
- Troubleshooting procedures

### Methods

Lectures (presentations) and demonstrations  
Perform tests and measurements on a fully equipped demonstration drive  
Visit of MV Drives assembly lines



### Student profile

Electricians, technicians and engineers, who will operate, maintain or troubleshoot the ACS6000c Cycloconverter drive system

### Prerequisites

Basic knowledge on synchronous motors and drive systems

### Duration

4 days

### Venue

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### Additional information

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## Course outline

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#### Day 1

- Introduction to Variable Speed Drives
- Hands-on: Replacing thyristors and fiber optics
- System description
- Factory tour

#### Day 2

- Hands-on: Thyristor replacement
- Operation principle
- Control hardware
- Water cooling system
- Control loop exercise

#### Day 3

- Propulsion control system
- Hands-on: Operation of the drive
- Control boards exercise
- Hands-on: SW tool DriveWindow

#### Day 4

- Hands-on: Shaft encoder sync.
- Hands-on: Phase test
- Troubleshooting
- Preventive maintenance
- Final exam