

ABB Marine Academy course description

H866 - STADT x-AC-y-z drive

Course goal

The goal of this course is to train the participants in the safe operation, control, configuration, troubleshooting and maintenance of a STADT x-AC-y-z Drive.

Learning objectives

Upon completion of this course, students will be able to locate the hardware components, to verify and replace the drive's parts and to perform preventive maintenance.

DriveWindow is used as a programming and troubleshooting tool and is learned by practical exercises on our training drive.

Contents

General topics

- Introduction to ABB Marine Services
- Safety while working on the drive
- Guided tour of the production facilities
- In-depth theory of the Stadt x-AC-y-z Drive principles

Hardware description (power electronics and control)

- Functions of components and PCB's (printed circuit boards)
- Hardware schematics and electrical drawings
- Installation guidelines

Water cooling system

- Cooling circuit description
- Direct IGBT water cooling principle
- Importance of cooling water mixture

Operation

- Charging and discharging of the converter
- Start/stop sequence using local control panels and DriveWindow tool

Software introduction

- Application Motor Controller concept
- PLC protection system
- Detailed explanation and demonstration of alarm system

Fault-tracing and troubleshooting

- Interpretation of alarm and fault messages
- Replacement of PCB's and other components
- Contacting ABB support



Methods

Visit to the factory assembly line
Lectures with demonstration on our training drive
Practical exercises with the training drive

Student profile

Marine engineers and electrotechnical personnel at the support and operational level

Prerequisites

Marine power plant basic for technical staff in ABB propulsion or similar knowledge is advisable

Duration

4 days

Venue

Ulsteinvik
Singapore

Additional information

Maximum 8 participants
On-site training on request

H866 - Operation and maintenance of STADT x-AC-y-z Drive

Course outline

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Day 1

- Introduction
- Visit assembly line
- Stadt drive principles
- Drive components
- Installation

Day 2

- DriveWindow
- Alarms/interlocks
- Preventive maintenance
- Fault tracing

Day 3

- Exercise – changing a power block

Day 4

- Exercise – changing gate drivers and diodes
- Spare parts
- Questions and discussion
- Practical tests