COURSE DESCRIPTION

H864 Marine ACS6000 Operation & Maintenance

Course goal
The goal of this course is to train the participants in the safe operation, control, configuration, troubleshooting and maintenance of the ACS6000. The students will develop their knowledge, confidence and skills in the handling of ACS6000 Voltage Source Inverter.

Main learning objectives
The course goal is to teach students how to operate, maintain and troubleshoot the ACS6000 drive.
Upon completion of this course, the students will be able to locate the hardware components, to verify and replace drive’s parts and to perform preventive maintenance. The use of the available programming and troubleshooting tools is taught by practical operating exercises.

Participant profile
Electricians, technicians and engineers who operate, maintain or troubleshoot ACS6000.

Prerequisites
- Basic knowledge of AC motors and drives
- Basic knowledge using Windows computers

Topics

Generalities
- ACS6000 family overview, system requirements
- AC motor and DTC control
- Drive specific safety requirements

Hardware description (power electronics & control)
- Component and PCB functions
- Hardware schematics and electrical drawings
- PCB settings and configuration

Water cooling system
- Cooling circuits description
- Preventive maintenance

Operation
- Energize / de-energize, start / stop sequence
- Local operation with drive control panel and DriveWindow tool
- Remote control

Software introduction
- Software structure, parameters description
- Application configuration

Fault tracing and troubleshooting
- Alarm and fault indications
- Checking and replacing PCB’s and components
- Using DriveWindow SW tool for configuration and troubleshooting
- How to get help from ABB
**Course type**
This is a face-to-face classroom training with maximum 8 participants.

**Learning methods and tools**
- Lectures and demonstrations
- Practical exercises on fully operational training drive and other training equipment
- Factory visit

**Duration**
4 days

**To register:**
Please contact ch-learningcenter-mvdrives@abb.com

Custom-tailored training courses or standard training at additional course dates are available on request. Please note: The course is only carried out if at least 4 participants have been booked.

### Course outline

<table>
<thead>
<tr>
<th>DAY 1</th>
<th>DAY 2</th>
<th>DAY 3</th>
<th>DAY 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>— Course overview</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>— Product overview</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>— Active Rectifier / Inverter Unit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>— Hands-on: Checking semiconductors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>— Hands-on: Removing phase module</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>— Line Supply Unit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>— Capacitor Bank Unit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>— Excitation Unit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>— Water Cooling Unit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>— Factory visit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>— Control Unit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>— Protection concept</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>— Hands-on: Operation of the drive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>— Application SW</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>— Hands-on: DriveWindow tool</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>— Preventive maintenance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>— Hands-on: Exchanging semiconductors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>— Hands-on: Troubleshooting</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

Classroom training  
Hands-on training