

ABB Marine Academy course description

H840 – Low Voltage Drive System, Operation, Maintenance and Troubleshooting

Course goal

This training course is targeted to end users who have to operate, maintain and troubleshoot ACS800 and ACS880 On/Offshore Drive Systems. Attention is given to basic concepts of VFD functionalities, power distribution from the transformer to the asynchronous motor and hands-on practice to consolidate confidence with the product.

Learning objectives

Upon completion of this course, the participants will have a deep understanding of VFD principles, clear steps to operate, maintain and troubleshoot issues.

Contents

- Low Voltage Power Distribution Theory
- ACS800 and ACS880 system application program
- Control panel functions
- Control panel assistants
- Locating and identifying terminals
- Installation principles
- Basic Adaptive programming & DriveAP tool
- DriveWindow maintenance tool operations
- AC800M, CI858 and S800 I/O
- Fault tracing

Methods

Classroom lectures and workshop session

Certification Level

Basic

Student profile

Electrical Advanced operators, Engineers and Superintendents

Language

English, Italian



Prerequisites

None

Duration

5 days

Venue

Genova (Italy)

Additional information

Minimum 6, maximum 8 participants.

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Course outline

Day 1

ACS800 and ACS880 different types, air cooled/liquid cooled
6 pulse -12 pulse configuration, low harmonic drive
Regenerative drive (ISU) / resistor braking
The concept of Multidrive and DTC

Day 2

The problem of shaft current, motor bearings, harmonics
Regenerated power, resistor braking, EMC and cabling
Examples of harmonics
Examples of industrial applications

Day 3

DriveWindow software
Theory, parameters change
Tuning
Exercise on simulators

Day 4

Hands-on sessions on several ACS800 and ACS880 models
Components acknowledgment and in-depth explanation
Maintenance procedures
Maintenance Schedule and Preventive Maintenance Kit

Day 5

R8i module dismounting
Drives Reforming procedure
AC800M and Application Maintenance
Final Exam and Certification