

Course description

G931

Motors and Generators Training for Service Partners

Course Duration

The duration of the course is three days;
Location is one the ABB global service center

Course type

This is an instructor led course with extensive practical training in the production lines. The language of the course is English.

Course Goal

The goal of the course is to give participants a good understanding of ABB's large HV motors and generators, their structure and the concepts of motor life cycle management. The motor theory combined with practice in the motor factory helps the participants to understand the structure of the motors, the purpose of testing, and the concepts of maintenance and repair activities.

Student Profile

This training is targeted at ABB Machines service partners, ABB employees in service centers and in project implementation.

Prerequisites and Recommendations

Experience with large HV motors and generators.

Course Fee

The course fee is 500€ which covers lunches, refreshments and course dinner..

Course Objectives

Upon completion of this course, students will be able to:

- Have a good understanding of ABB portfolio of large HV motors, generators and DC motors
- Have a basic knowledge regarding design of the ABB large HV motors, generators and DC motors
- Contact channels for each type of motor
- Machines Life Cycle Management
- Main maintenance and repair activities on ABB motors and generators

Main Topics

- Product range
- Obsolete products
- Basic mechanical design
- Electrical design
- Winding and insulation systems
- Testing of motors and generators
- Complaints and warranty handling
- Technical support
- ABB After Sales products
- Lifecycle management
- Repair and maintenance of safe area motors
- Overview of EX motors

BU Machines Training

www.abb.com

www.abb.com/abbuniversity

Power and productivity
for a better world™



Agenda

G931

Motors and Generators Training for Service Partners

Day 1

- 09:00 Course Opening
General overview
- 09:15 ABB After Sales Organization
Review of global service centers
roles and responsibilities
- 09 :45 Principles of Operation
Review of different technologies used in HV
Motors and Generators and their principles
of operation
- 10:15 Coffee Break*
- 10:45 Electrical and Mechanical Designs
Electrical and Mechanical design and main
constructional parts
- 11:30 Winding and insulation technology
Insulation technology, materials and
processes
- 12:00 Review of various product lines
Construction and features of ABB induction
and synchronous motors
- Induction motors
- 12:30 Lunch*
- 13:30 Factory tour
- 15:00 Review of various product lines
- Synchronous motors and generators
- 15:30 Review of various product lines
- Flameproof motors (AMD)
- 15:45 Coffee Break*
- 16:15 Review of various product lines
- Wound rotor motors
 - Wind turbine generators
 - DC motors
- 17:00 End of Day

BU Machines Training

www.abb.com

www.abb.com/abbuniversity

Power and productivity
for a better world™



Agenda

G931

Motors and Generators Training for Service Partners

Day 2

- 09:00 Program of the day
General overview
- 09:05 Life cycle management part I
TEAM, availability, reliability
- 09:45 Break*
- 10:00 Life cycle management part II
TEAM, availability, reliability
- 10:45 Coffee Break*
- 11:15 Preventive maintenance
Methods and programs L1-L4
- 11:45 Operation and maintenance manuals
- Transport and storage
 - Installation and commissioning
 - Alignment and connections
 - Start-up
 - Trouble shooting
- 12:30 Lunch*
- 13:30 LEAP program
Review how it can be used in preventive maintenance
- 14:00 Maintenance and repairs of various machine types
- Standard parts and special parts
 - Do's and don't's
- 15:30 Coffee Break*
- 16:00 Workshop/Group work
- Issues and solutions
 - Presentation from each group
- 17:00 End of Day

Day 3

- 09:00 Program of the day
General overview
- 09:05 Spare parts, refurbishments, replacement machines
- 09:45 Warranty handling
ABB processes and tools
- 10:30 Coffee Break*
- 11:00 Measurements and testing
Tests on new motors in factory
Tests on repaired motors
Field testing
Inspection and test protocols
- Ex-Machines
Review from service point of view
- 12:30 Lunch*
- 13:30 Ex-Machines
Review of EX machines
- 14:00 Case Examples
- How to succeed and things to avoid
- 14:45 Factory tour
Stations of various manufacturing activities
- 17:00 End of the Seminar

BU Machines Training

www.abb.com

www.abb.com/abbuniversity

Power and productivity
for a better world™

