COURSE DESCRIPTION

G830 MEGADRIVE-LCI with AC 800PEC Service & Commissioning

Course goal
Load Commutated Inverters (MEGADRIVE-LCI) or in other terms Static Frequency Converters (SFC) are used together with large synchronous motors as an adjustable speed drive or to start large gas turbines without high inrush current on the power supply. These systems are available in a power range from 1MW up to 100MW.

Main learning objectives
Upon completion of this course, the participants will be able to:
- know the function of a MEGADRIVE-LCI
- know the different modes of operation
- are able to operate and maintain a MEGADRIVE-LCI
- know how to perform the test programs
- are able to localize faults and replace defective parts

Participant profile
Commissioning, application and service engineers
Testing and maintenance personnel who need deep knowledge in LCI - systems

Prerequisites
- Electro technical college qualifications or equivalent
- Basic knowledge of synchronous machines
- Basic knowledge of personal computers

Topics

Power electronics in general
- The function of rectifiers and inverters

Static Frequency Converter
- Principal function
- Configuration for various applications
- Regulation circuits
- Characteristic curves
- Limitations, monitoring and protection

Operation
- Operating modes
- Annunciation

Safety in relation to MEGADRIVE-LCI

Documentation
- Project documentation
- How to read the Hardware schematics
- Software overview

Hardware components
- Functions, settings
- Interfaces to peripherals
- Water cooling / Air cooling

Maintenance and troubleshooting
- Replacement of Thyristors
- Software tools:
  - AC 800PEC tool
  - LCI Control Terminal (Operation, Event, Transient Recorder)
- Test programs

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Course type

This is a face to face class room training with maximum 6 participants.

Learning methods

— E-Learning, internet-based course
— Lectures and demonstrations
— Practical exercises with training equipment

Duration

5 days classroom training

To register:

Please apply online (signup required):
Motion Upskill/G830
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

DAY 1	DAY 2	DAY 3
— Course overview — Basic LCI-Theory - overview - rectifier - mode of operation - block-diagram - on/off sequences - protection — Characteristic curves	— Operator Training - Converter - Safety - Operation - Fault handling — User's manual operation — Maintenance Training - Safety instruction - Converter overview - Documentation - How to read hardware drawing — Factory Tour	— Maintenance Training (cont.) - Preventive maintenance - Corrective maintenance — Overview Hardware component - signal flow - setting

DAY 4	DAY 5
— Maintenance Training (cont.) — Testprograms — Flux Calculation — Check of firing angle	— Maintenance Training (cont.) — Software handling — User's manual — Trouble shooting — Commissioning procedure

Classroom training

Hands-on training

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