

Mark V course

Wouldn't it be great, if you could determine and solve most technical problems yourself so maximum availability and reliability is within reach. It's possible with our Mark V course.

By means of case studies, aspects as Mark V hardware, documentation and development of control signals will be presented. You will get a thorough understanding of gas turbine control systems and how to use maintenance screens to quickly determine problems.

Are you a technician or engineer and you're interested in a Mark V training in operations, maintenance, engineering services? This course will give you the answers.

Course Outline

Day 1

- Introduction
- Mk-V Hardware Familiarization

Day 2

- Operator Interface: <I> or <HMI>, <BOI>
- Documentation
- Big Block Language

Day 3

- FSR_SU/_ACC/_SD: Description, Algorithm, Calibration
- FSRN: Function, Algorithm, Alarms/Trips, Calibration
- FSRT: Function, Algorithm, Alarms/Trips, Combustion Monitor, Calibration

Day 4

- Fuel Control: Servo Mechanisms, Gas Control Valve; Liquid Control Valve, Fuel Spitter, DLN Splitter
- Emissions Control: Water Injection, Dry Low NOx
- Variable Inlet Guide Vane

Day 5

- Protective Circuits: L4, Overspeed Trip, Emergency Overspeed Trip, Overtemperature Trip, Vibration, 20FG/20FL (including Circuit cards)
- Examination

Objectives

After five days you will master the following objectives:

Documentation

- how to use OEM provided documentation that will include the Control Specifications, Control Sequence Program, I/O Configuration, CSP Cross Reference, Alarm Drop List, Application Manual, and P& IDs

Hardware

- understand the Mk-V hardware components, how they are accessed, and how they communicate.
- the necessary knowledge to calibrate turbine valve mechanisms (or knowledge -- based upon equipment availability)

Software

- follow the major "control signal path" through a Control Sequence Program
- trace the derivation of a command signal to the servo-mechanisms
- how to use more efficiently the Mk-V <I> /<HMI> screens for evaluating/calibrating systems .
- force logic to facilitate calibration (or knowledge -- based upon equipment availability)
- how to change constants or re-program ladder logic such as to add contact input/outputs, add alarms, and/or alter sequencing
- understand on-line and off-line test sequences

Troubleshooting

- troubleshoot an equipment alarm, given an Alarm Drop Number
- interpret the more routine diagnostic alarms and recognize appropriate actions
- given plant drawings, trace a signal to/from a field device through appropriate terminal boards, through circuit boards, to a digital "signal name".
- follow signal flow to/from the <P> core to trip/reset the machine
- describe the differences between a <Q> trip and a <P> trip

Examination & Diploma

Those who attend this course are automatically qualified to take the Certification Examination.

There are no additional expenses to participate in the exam. An 80% pass mark is required and the examination length will not exceed 2 hours.

Those who obtain a positive result will receive a diploma which is internationally accepted and accredited by IACET (International Association for Continuous Education and Training).

Specifications

Entrance requirement

Both levels are required to participate:

- Engineer
- I&C Technician

Instructor

The mark V course will be presented by a highly respected professional with GE field and training experience. This course will be executed in English; all training material is in English as well.

Price

The price for this course is 3.500,00 Euros per person (VAT excluded).

Payment in advance after receipt of our invoice.

ABN-Amro Bank, Arnhem, the Netherlands

Bank account: 530028778

IBAN: NL30ABNA0530028778

BIC (Swift code): ABNANL2A

What's included?

- Training manual on CD-rom (or a printed version, upon request)
- A training by a certified trainer who uses a mark V simulator and sheets for presentation
- The use of a computer during the course
- Lunch
- Examination

What's not included?

- Hotel & accommodation

Upon request accommodation can be booked for you, but for your own expense. The cost for an overnight stay is around 120,- euro's per night. Please mention in your request for a hotel accommodation in your email.

Location and duration

The location of this course is in Arnhem, the Netherlands and has a duration of five days.

Monday	10.00 – 17.00
Tuesday – Thursday	09.00 – 17.00
Friday	09.00 – 16.00

A free lunch, coffee & tea and soft drinks are included.

Registration

Wish to participate? Please register online at www.speedtronic.com or fill in the registration form in this brochure and fax it to +31.263.684.868.

Don't forget to subscribe at least 4 weeks prior to the first course day. When registered, you will receive an order confirmation.

Cancellation

If you have subscribed and you are forced to cancel due circumstances beyond your control, you can cancel the registration according our cancellation policy below:

- Cancellation up to 6 weeks before course date: full refund
- Cancellation < 6 weeks: no refund, but the opportunity to attend next course.

We reserve the right to cancel or to defer the course to a later date in the event of too few participants. In such case a full refund will be in order.

We are not responsible for any expenses related to non-refundable airline tickets or hotel accommodations.

Further information

If you need more information about this course or other course possibilities, please don't hesitate to contact us phone: +31.26.368.48.39

e-mail: sales@speedtronic.com