

Generator / SCR Drives Control Course - Level 2

Course Code : AT 6204



Course Length (Days)	Taught Hours	Practical Content (%)	Theoretical Content (%)
6	42	40	60

TARGET AUDIENCE

This course is designed for electrical personnel working in the drilling industry, and is principally aimed at staff employed on drilling rigs, typical of those built in the late '70s to mid '90s, equipped with integrated generator control and SCR systems, and fitted with the Top Drive System.

COURSE OUTLINE

The course covers the function of the engine actuator, SCR field supply, and Top Drive control system which incorporates the top drive field regulator and the Siemens Simatic Manager S7 PLC system related to the top drive management. Practical work will be undertaken in our SCR training facility which incorporates working 600V generators, RHCC type SCR system, top drive control system, and drilling motors.

COURSE OBJECTIVES

To increase candidates' knowledge of the operational practice of their SCR and Top Drive system. The course will expose them to practical scenarios in a realistic environment to increase fault finding and problem solving skills. Our working systems give hands on experience that is difficult to acquire whilst drilling operations are in progress. Candidates who have passed the SCR Drives Control Course Level 1 are eligible to enrol for this course.

COURSE CONTENT

Theory Components

- **Introduction**
Electrical safety
- **Engine actuator**
General description and operation
- **SCR Field Supply**
Passive Field Supply
Active Field Supply
HED and Sprocket slip
- **Top Drive control system**
Introduction to Top Drive control system
Top Drive Console Function, Operational and Failure status displays
Transfer Panel Function
Top Drive field regulator
- **Siemens Simatic Manager S7 PLC Logic, Operation & Diagnostics**
Introduction to PLC architecture
Components and modules in PLC system
Hardware fault identification
Operational overview of Simatic Manager S7
Profibus system hardware interfacing
Controller communication and interface
Controller fault verification

Practical Components

- Use of the oscilloscope / scopemeter
- PLC communication via laptop
- Trouble shooting the system
- Final question paper

DELIVERY

Teaching aids, apparatus, slides, videos, practical demonstrations, questionnaires, theory and practical assessments.

CERTIFICATION

ATTS Certificate of Attendance
ATTS Final Certificate showing results of theory and practical assessments will be awarded.

Minimum Number Of Delegates Required Per Event

8

Times Of Training

08:30 to 17:00

Venue

28B Penjuru Close, #01-06, Singapore 609130

Special Requirements

Delegates are required to supply their own personal protective safety equipment.

Dates And Prices

- Check with course administrator