



4-DAY SCR TRAINING COURSE

Course Code : AT 4207

Course Length (Days)	Taught Hours	Practical Content (%)	Theoretical Content (%)
04	28	60	40

TARGET AUDIENCE

This course is designed for electrical personnel involved in the maintenance of drilling rig equipment.

COURSE OBJECTIVES

Our objective is to give the candidates an increased understanding of the operating principles of their electrical system and DC motor drives, and to instil a structured methodology for practical fault finding in order to enhance their trouble shooting and problem solving skills.

COURSE OUTLINE

The course examines the basics and operating principles of SCR drive systems, and covers the main components of typical generator and drive control switchboards as used extensively on drilling rigs. Practical work will be undertaken in our training facility on our fully functional Ross Hill SCR system with 600V AC generators, DC drilling motors, top drive control system, and motor control centre.

The practical exercises are conducted on our working systems in a realistic environment, and the candidates will get hands-on experience that is almost impossible to acquire on the rig whilst drilling operations are in progress. With this experience and their improved fault finding skills, troubleshooting time in the workplace (and potential rig downtime) should be minimised.

COURSE CONTENT

THEORY COMPONENTS

- **Introduction and basic theory**
Electrical safety & isolation
Recap of basic theory
SCR Rectifiers, & harmonics
The Scopemeter
Systematic Fault finding
- **SCR electrical systems**
Drawings and their interpretation
Diagnostics
- **AC Generators and control**
Speed control, engine actuators and electronic governors
Automatic voltage regulation
AC control electronics

- **DC drilling control**
DC motors and drive basics
SCR system types
The SCR bridge and auxiliaries
DC control electronics
- **Field supplies, system logic and protection**
Active and passive DC motor field supplies
Assignments and control logic
System protection
Ground fault detection and surge suppression
- **Final Test Paper**

PRACTICAL COMPONENTS

Use of the Scopemeter
SCR system trouble shooting exercises

DELIVERY

Teaching aids, slides, videos, practical demonstrations, questionnaires, practical assessment

CERTIFICATION

ATTS Certificate of Attendance

Minimum Number Of Candidates Required Per Event

4

Times Of Training

08:30 to 17:00

Venue

No. 3, Buroh Street, Singapore 627566

Special Requirements

Candidates are required to bring their own PPE

Dates And Prices

Please check with course administrator