

Training Title

Safe Operation & Maintenance of Circuit Breakers & Switches

5 days

Training Venue and Dates

Safe Operation & Maintenance of Circuit Breakers & Switches	5	24-28 January	\$3,300	Dubai
Safe Operation & Maintenance of Circuit Breakers & Switches	5	03-07 October	\$3,300	Dubai

In any of 5 star hotel. Exact venue will be informed later.

Training Fees

- 3300 US\$ per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Buffet Lunch

Training Certificate

Define Management Consultants Certificate of course completion will be issued to all attendees.

Language: English

TRAINING OVERVIEW

COURSE DESCRIPTION

Any engineer and technician dealing with power supply networks needs to understand the basic principles of switchgear and circuit breaker design, operation and maintenance. This has a significant role in ensuring safety of equipment and personnel. A correct understanding of the basic principles involved will help to avoid mistakes in switching operation and protection performance that could lead to expensive failures and long blackout.

WHO SHOULD ATTEND:



The course is designed for Electrical Technicians, plants engineers and technicians, maintenance engineers and technicians, system engineers and operators in the oil and gas industrial plants who are involved in operating, maintaining, and troubleshooting or repair.

TRAINING OBJECTIVES:

At the end of the course, the attendees will be updated with the following:

- Understanding the operational characteristics of circuit breakers & switch gears.
- Understanding of troubleshooting procedures as applied to circuit breakers and associated switch gears.
- Improved capability in the use of test equipment
- Better understanding of failure modes & failure analysis as applied to fuses, circuit breakers and switch gears.
- Refreshed awareness of electrical safety concerns with in substations & control centers.

TRAINING METHODOLOGY:

- Highly interactive training
- Teaching lecture and lecture notes.
- Open discussions initiated by the lecturer.
- Case studies

TRAINING OUTLINE:

Day One

Chapter 1

1.1 Introduction

1.1.1 Voltage convention

1.1.2 Fundamentals of Circuit Breakers

1.1.3 Types of Breakers, Construction

1.1.4 Ratings, Tripping, characteristics

1.2 Switchgear in a network context

1.2.1 Single line

1.2.2 Utilization

1.3 Switchgear in historical perspective

1.3.1 Oil circuit Breakers

1.3.2 Air blast CB

1.3.3 SF6 and Vacuum CB

1.3.4 Operating mechanisms & Technology of Circuit breakers and switch gears

Day Two

Chapter 2

Switchgear Details

2.1 Ratings

2.2 Degree of Protection

2.3 Service Conditions

2.4 Ancillary equipment

Chapter 3

3.1 Circuit Breaker Diagnostic Techniques

3.1.1 Diagnostic Techniques

3.2 Switchgear vital equipment

3.2.1 Batteries condition monitoring

3.2.2 Discussions

3.3 Substation maintenance techniques

3.3.1 Description

3.3.2 Structures

3.3.3 Fuses, arresters, switches

3.3.4 Substation compound

3.3.5 Switchgear maintenance practices

Day Three

Chapter 4

Substation maintenance techniques

- 4. 1 Metal clad switchgear
- 4. 2 Maintenance details
- 4. 3 Metal clad switchgear maintenance details
- 4. 4 Discussions
- 4.5 Development of Job Plan
- 4. 6 Maintenance and repair fundamentals
- 4.7 Maintenance and repair procedures

Chapter 5

Diagnostics techniques and troubleshooting

- 5.1. Nomenclature
- 5.2 Trouble shooting guides

- SUMMARY AND CONCLUSION

Case Studies

NOTE: Last Day Review, Discussions & Assessment will be carried out.