

STEAM TURBINE OPERATIONS AND MAINTENANCE (REF:OTSSTT001)

Course Objectives

To understand the management of Operations, and the maintenance of a Steam Turbine.

Course Description

This course will focus on the Maintenance of Steam Turbines. The course will cover all aspects of Steam Turbine Maintenance including steam turbine systems, component maintenance and repair, assembly and dis-assembly of major items together with Steam turbine theory and operations.

Who Should Attend

This is an essential course for those engineers/technicians involved with Steam Turbines.

Pre-Requisites

All Attendees should have a sound power generation background.

Course Outcome

At the end of this course you will be able to operate and maintain a steam turbine.

Course Outline

Day 1 - Fundamentals and practical aspects of steam turbine operation

Introduction
Steam Properties
Boiler Operations and Principles
Basic Thermodynamics of Steam Turbines
Steam Turbine Types
Uses of Steam Turbines in Petrochemical Plants

Steam Turbine Components

Rotor Components
Reaction and Impulse Blading
Stator Blading
Steam Turbine Bearings

Day 2 - Steam Turbine Systems

Lube Oil Systems
Sealing Systems
Governors and Control Systems

Boiler Operations

Drums
Feedwater Systems
Condensers
Boiler Control

Day 3 - Steam Turbine Operations

Startup/Shutdown Operations
Control Valve/Stop Valve Operations
System Operations
Component Expansion

Steam Turbine Maintenance

Repair and Maintenance of Rotor Components
Stripdown/Rebuild Procedures
Blade Removal/Replacement



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Day 4 - Steam Turbine Maintenance

System Maintenance
Repair Procedures
Visit to OEL Workshop to witness bearing repair

Steam Turbine Alignment

Causes of Misalignment
Types of Misalignment
Pre alignment checks
Reverse Alignment

Day 5 - Steam Turbine alignment

Laser alignment
Hot alignment

Steam Turbine Troubleshooting

Methods of Troubleshooting
Commons Steam Turbine Problems and Solutions
Case Studies

Course review and Assessment

