

VIBRATION ANALYSIS AND PREDICTIVE MAINTENANCE (REF:OTSVAPM001)

Course Objectives

To gain an understanding of Vibration Analysis and Predictive Maintenance.

Course Description

The course explains basic vibration theory, the benefits of predictive maintenance and how to organize a predictive maintenance program. Coupled with this will be an overview of the interdependence of vibration monitoring, vibration analysis and condition based maintenance options.

Who Should Attend

The course is intended for engineers, mechanical technicians and maintenance staff involved in the creation of vibration monitoring programs for use in Predictive Maintenance.

Pre-Requisites

All Attendees should have a sound power generation and mechanical background.

Course Outcome

At the end of this course you will be able to understand how to use vibration analysis and predictive maintenance.

Course Outline

Day 1

Introduction
Basic Vibration
Typical Causes of Vibration
Characteristics of Vibration
Vibration and Root Cause Analysis
Frequency, Spike Energy, Displacement

Day 2

Case Histories with Vibration Spectra Displays
Amplitude Vs Frequency
What is a decibel?
Interpreting Amplitude/ Phase-vs. rpm plots
Stroboscopic Observations

Day 3

How Rotating Machines Behave
Machinery Mass and Speed
Shaft Systems

Day 4

How Rotating Machines Behave
Bearing Systems
Foundation and Support Structures

Day 5

Benefits of Predictive Maintenance Program
Cost Benefit Analysis
Cost Analysis
Detection Requirements
Case Histories with Vibration spectrum Displays

Course Review and Feedback

