

VIBRATION ANALYSIS - BASIC

TIME	TOPICS	TIME	TOPICS
0900 - 1000	Pre-assessment of the subject knowledge Fundamental principles of vibrations Brainstorming / activity / Question answers	1400 - 1500	Transducers & mounting Fault diagnosis / imbalance / misalignment Brainstorming / activity / questions & answers
1000 - 1100	Motion, R.M.S / Peak./ Peak-Peak Frequency / period / displacement Brainstorming / questions & answers	1500 - 1600	Looseness / eccentricity / resonance Defects associated with bearings Brainstorming / activity / questions & answers
1100 - 1200	Acceleration / units & units conversion Waveform and spectrum / FFT Brainstorming / questions & answers	1600 - 1630	Defects associated with gears Defects associated with belts / electric motors. Brainstorming / questions & answers
1200 - 1300	Natural frequencies Basic forcing frequencies / data acquisition Brainstorming / questions & answers	1630 - 1700	Brainstorming / questions & answers Conducting Post Test / final training evaluation Participants Feedback / Certificate distribution

COURSE OVERVIEW

This fundamental course is designed and developed for professionals who are new to vibration monitoring and analysis. This course will provide in depth knowledge of why it is important to know the condition of the machine and a quick demonstration of vibration measurements and samples of data that indicate machine faults making it easy to learn about the faults and their remedies. Case studies will be presented using historical graphs to understand the process easily. The course focuses on periodic, single channel data collection and analysis for condition based maintenance programs. A foundation is established for in-depth understanding of spectrum and waveform relationships. Participants will learn the vibration fundamentals & also learn how spectrum analysis can be used to diagnose faults.

COURSE BENEFITS

Participants are going to get following learning benefits by attending this training course.

- ▶ They will be equipped with the skill set to analyse the machine condition by using vibration analysis methodology.
- ▶ They will be able to read and understand the spectrums analysis & perform vibration analysis jobs at their work more effectively.
- ▶ They will have better understanding of the preventive / proactive maintenance.

WHO SHOULD ATTEND

If you have been performing vibration analysis for less than one year, or if you have been collecting vibration readings and leaving the analysis to another person, then this course is for you. This course is also designed for reliability engineers, PdM program engineers, and other maintenance staff who would like to understand condition monitoring with a focus on vibration analysis, and take the ISO or ASNT exam.

- ▶ Condition monitoring technicians & engineers
- ▶ Rotating equipment, maintenance & reliability engineers