Best Technology Soultions **(BTS)**

Training Program

Advanced Machinery Diagnostics

Training program

Introduction:

This course builds upon the Data Acquisition computer based training, providing the foundation for machinery diagnostics. The hands-on approach gives students the experience they need to feel confident when taking action at their plant. This is a “must have” course for those who interpret or plan on interpreting machine vibration and position data to determine machine condition.

Who Should Attend?

- Engineers interpreting machine vibration and position data to determine machine condition
- Engineers involved in the design, acceptance testing and maintenance of rotating machinery
- Engineers who want to learn about machinery vibration diagnostics

Course Objectives:

- Explain how the fundamentals of machine design and behavior are reflected in the vibration measurements.
- Reduce machine vibration data into usable plot formats.
- Explain which plot formats are best to use in the different stages of machine diagnostics.
- Describe the causes, effects and indicators of the typical machine malfunctions; including recognition of problems such as unbalance, misalignment, rubs, shaft cracks and fluid induced instabilities.

Course outline:

Day 1

- Introduction to Machinery Management & Diagnostics
- Phase Measurements
- Steady State Data Formats

Day 2

- Fundamental Synchronous Rotor Response
- Single Plane Balance Response
- Transient Data Formats

Day 3

- Plot Interpretation
- Multiplane Balance Response
- Partial Radial Rubs

Day 4

- Preloads and Radial Position Measurements
- Vibration Types and Resonances
- Fluid-Induced Instabilities

Day 5

- Shaft Crack Detection

Case History Workshop