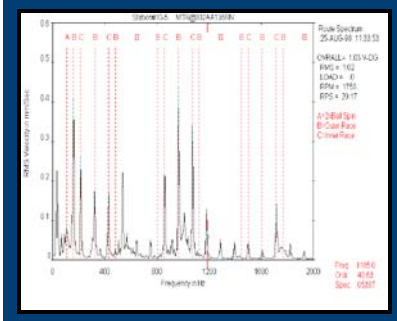
ITT

Plant Performance Services

Plant Performance Learning Services



Workshop Objectives:

Participants will be learn to:

- *Perform predictive maintenance vibration data collection (run "routes", etc.).*
- *Collect vibration data for special diagnostic tests.*
- *Perform acceptance tests on new or rebuilt rotating machines.*
- *Analyze the cause of many common vibration problems on motors, fans, spindles, etc.*
- *Effectively use predictive maintenance software provided by CSI, Entek/IRD, SKF, etc.*

What's included:

- *Expert facilitators*
- *Professional training materials*
- *Live demonstrations*
- *Discussion sessions*
- *Case histories*
- *Demonstration units for hands-on experience*
- *Networking opportunities*
- 3.4 Continuing Education Units (with exam only)

Basic Vibration Analysis (Category II) –

Four Days (w/o exam), Four and a Half Days (w/exam)

Who Should Attend?

This course is designed for personnel that are directly involved in vibration measurement and analysis and for engineers and supervisors with an interest in or responsibility for predictive maintenance programs.

What you will learn:

This course is designed to prepare individuals to work in vibration-based predictive maintenance programs. Course content includes the fundamentals of vibration analysis and the procedures used to implement predictive maintenance on rotating machinery used in manufacturing and plant facilities.

A series of lecture/discussion sessions with live demonstrations, problem solving sessions, and hands-on workshops involving the use of vibration instrumentation are used to teach course concepts. This allows participants to become familiar with vibration monitoring and diagnostic, as well as the operation of diagnostic instruments. Several workshops are provided through the use of specially designed rotor demonstrators. These demonstration units allow participants the opportunity to actually measure the vibration caused by defects designed into the demonstrators. Topics include the following:

- Introduction to Vibration
- Vibration Units
- Vibration Sensors
- Vibration Diagnostic Plots
- Vibration Analysis of Ball & Roller Bearings
- Vibration Limits & Acceptance Testing
- Vibration Phase & Phase Angle
- Natural Frequencies & Resonance Vibration
- Vibration Analysis of Imbalance
- Vibration Analysis of Misalignment
- Vibration Analysis of Mechanical Looseness
- Vibration Analysis of Gears
- Vibration Analysis of Drive Belts
- Vibration Analysis of AC & DC Electric Motors
- Vibration Analysis on Centrifugal & Positive Displacement Pumps
- Implementation of Vibration Based Predictive Maintenance Programs

The last day of class includes a review of course material with a self-assessment. ISO Vibration Analysis Category I or Category II Examination is optional and may be available for an additional fee.

Prerequisites:

- The ability to use simple algebraic formulas for conversion of units is required.

For Information:

- Open training classes, visit www.ittpps.com/learning.html or call 315-568-7548 *(Note: Open classes include breakfast and lunch. Company group discounts are available for 3 or more registrants.)*
- Private or tailored offerings, call 800-734-7867
- ITT's Plant Performance Services, visit www.ittpps.com