

Level 2 Vibration Analysis

- This course conforms to BINDT CM/GEN Appendix D & ISO 18436:2 Level 2
- The course is intended for personnel who have at least twelve months vibration analysis experience with a good understanding of vibration theory.
- Extensive use of live animation software and rotating equipment rigs

■ Introduction and review of maintenance practices and CM technologies

■ Principles of vibration

- Waveform, spectrum, phase and orbits. Modulation, beats, sum/difference

■ Data acquisition and signal processing

- Transducer types, transducer selection and mounting
- Measurement point selection. Filters, averages, window types.

■ Vibration analysis

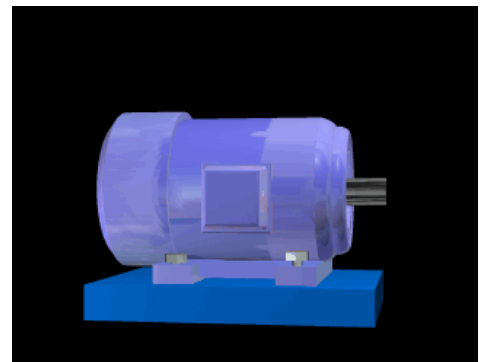
- Spectrum analysis- Harmonics, sidebands, and analysis
- Time waveform, Phase and Orbit analysis
- Enveloping (demodulation), shock pulse, spike energy

■ Fault analysis

Natural frequencies and resonance

- Imbalance, eccentricity and bent shaft
- Misalignment, cocked bearing and soft foot
- Mechanical looseness
- Rolling element bearing analysis
- Motors
- Analysis of gears
- Belt driven machines
- Analysis of pumps, compressors and fans
- Equipment testing
- Corrective action
- Running a successful program
- Acceptance testing
- Review of ISO standards

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