Vibration Analysis Training

ISO Category 3 / ASNT Level 3

Vibration Institute of Australia

Vibration Analysis Category 3

The Vibration Specialist "Advanced" course is intended for personnel who have at least 2 years vibration analysis experience and a thorough understanding of vibration theory and terminology. The course provides an in-depth study of diagnostic measurement techniques and their associated applications.

It is expected that the attendee is either the leader of the vibration team, or takes a leading role in diagnosing faults and making the final recommendation.

This person must fully understand all of the data collector options, special test capabilities, and analysis tools; and must understand the widest range of fault condition.

This course will give the analyst all of the skills and knowledge necessary to solve all fault conditions, and to run a successful condition monitoring program.

Unique Benefits

- When you register for this course, you will receive the iLearnVibration pre-study internet logon. Prepare and you will succeed!
- Our course utilises modern slides, animations, innovative simulations, and live case studies - all delivered by certified instructors.
- You can take the optional certification exam. The training course and exam follows the ISO 18436.2 Category 3 standard, and the ASNT SNT-TC-1A Level 3 standard.

Course materials

- Pre-study materials iLearnvibration internet logon sent on registration
- 300 page course notes
- short-form booklet
- diagnostic mousepad
- certificate

Vibration Institute of Australia

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Course Summary

Principles of vibration
- Very quick review of fundamentals
- Waveform, spectrum, phase, vectors and orbits
- Signals: transients, pulses, modulation, beating, sum/difference
- Force, response, damping, and stiffness
- Cepstrum analysis

Data acquisition
- Planning routes, test locations and programs

Signal processing
- Sampling, resolution, Fmax, averaging, windowing, dynamic range, signal-to-noise ratio
- A/D conversion: constant and variable sampling rate

Vibration analysis
- Spectral, time waveform and envelope analysis

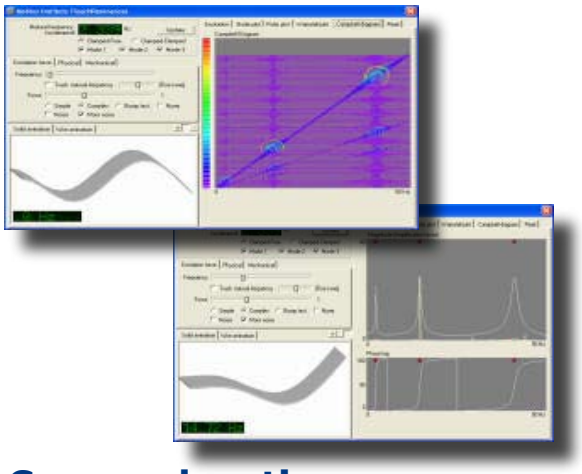
Equipment testing and diagnostics
- Impact testing (bump tests)
- Phase analysis
- Transient analysis
- Operating deflection shape analysis
- Introduction to modal analysis
- Cross channel measurements

Fault analysis in detail
- Natural frequencies and resonances
- Imbalance, eccentricity and bent shaft
- Misalignment, cocked bearing and soft foot
- Mechanical looseness
- Rolling element bearing analysis
- Analysis of turbo-machinery and sleeve bearings
- Analysis of AC, DC and variable frequency drives
- Analysis of gears and belt driven machines
- Analysis of pumps, compressors and fans
- Lots of case studies and exercises for participants

Corrective action
- Balancing and shaft alignment
- Resonance control, isolation and damping

Successful condition monitoring program
- Alarms, reports, management, finances

Acceptance testing and ISO standards



Course duration

The course consists of four and half days of training plus an optional 4 hour exam.

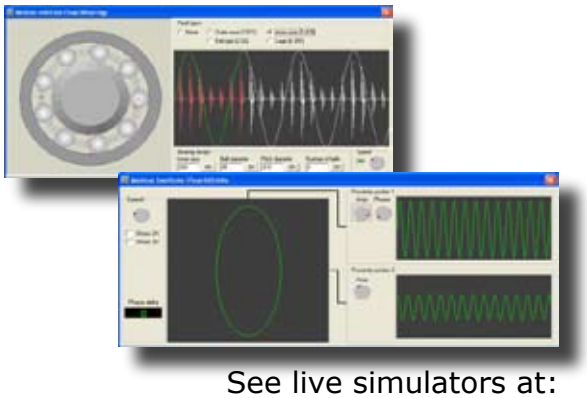
Hours

Days 1-4: 8.00 am to 4.30 pm
Day 5: 8.00am to 5.00pm
Training + 4 hour Exam

Fees

Training without exam:
$2490 + $249 (GST) = **$2739**
Training with exam:
$2970 + $297 (GST) = **$3267**

Prices include lunches and refreshments.



See live simulators at:
www.viaustralia.com.au
and www.ilearninteractive.com

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