



Vibration Analysis: Level 2

Course Overview:

This course will provide you with the knowledge and competence to perform industrial machinery vibration measurements and basic vibration analysis using single-channel measurements.

During the course, you will learn to:

- Select appropriate vibration measurement techniques
- Set up instruments for basic resolution of amplitude, frequency and time
- Perform basic spectrum analysis
- Maintain a database of results and trends
- Perform single-channel impact tests
- Classify, interpret, and evaluate test results in accordance with applicable specifications and standards
- Recommend minor corrective actions, and understand basic single plane field balancing concepts

The course exceeds the ISO 18436-2 Category I standard and meets the ASNT Level I Recommended Practice.

Why VCI Limited?

We are an approved training organisation (ATO) for the British Institute of Non-Destructive Testing (BINDT) and are able to provide technical training in both theory and practical elements across the full scope of Maintenance and Reliability subjects.

All of our accredited training courses exceed the syllabus guidelines for ISO and PCN standards and where required training material can be adjusted to align with our clients' business and operational development needs.

Requirements

Must have already obtained Vibration Analysis Level 1

Learning Outcomes:

The course aims are designed to give the candidate a firm understanding of the following concepts and practices:

- An outline on the understanding to enable you to select the appropriate machinery vibration measurement techniques to be applied.
- An understanding on instrument setup for resolution, amplitude, frequency and time.
- An understanding of basic vibration analysis of machinery/component faults i.e. motors, couplings, pumps, fans, gearboxes and bearings using spectral analysis
- Principles and application of natural frequency detection by single channel impact testing
- Principles and application for single plane balancing
- Principles for determining basic equipment corrective actions
- Evaluation of data in accordance with current standards and specifications
- An understanding of the causes of bad data

Topics covered:

- An introduction to Condition Based Maintenance (CBM) and Condition Monitoring (CM)
- Principles of vibration
- Data acquisition
- Main signal processing steps
- Fault characteristics for a range of machine types
- Equipment and component knowledge
- Vibration severity assessment
- Single-plane balancing with and without phase
- Acceptance testing
- Equipment testing and diagnostics
- Reference standards ISO, API, IEC...
- Reporting and documentation.

Assessment:

The candidate will undergo a series of formative assessments throughout the duration of the course to ensure learning has taken place.

Towards the end of the course there are two internal summative assessments in the form of a practical and written exam. Candidates will be expected to achieve a 70% overall score in order to pass the course. Upon successful completion of the internal examination, candidates can undertake the BINDT ISO 18436-2 certification.

Candidate:

Plant personnel requiring a basic understanding of analytical methodologies used to determine machinery conditions for improvement of predictive maintenance program results; including maintenance supervisors, rotating machinery engineers, predictive maintenance coordinators, reliability engineers, and advanced mechanics and technicians.

Duration

Including examination – 5 Days

Progression:

Candidates who successfully achieve the Vibration Analysis Level 2 can progress on to the Vibration Analysis Level 3 course.

Contact:

For more information regarding our training courses, contact us:



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Further Information

<http://www.bindt.org/downloads/CMGEN.pdf>

<http://www.bindt.org/downloads/CMGEND.pdf>