



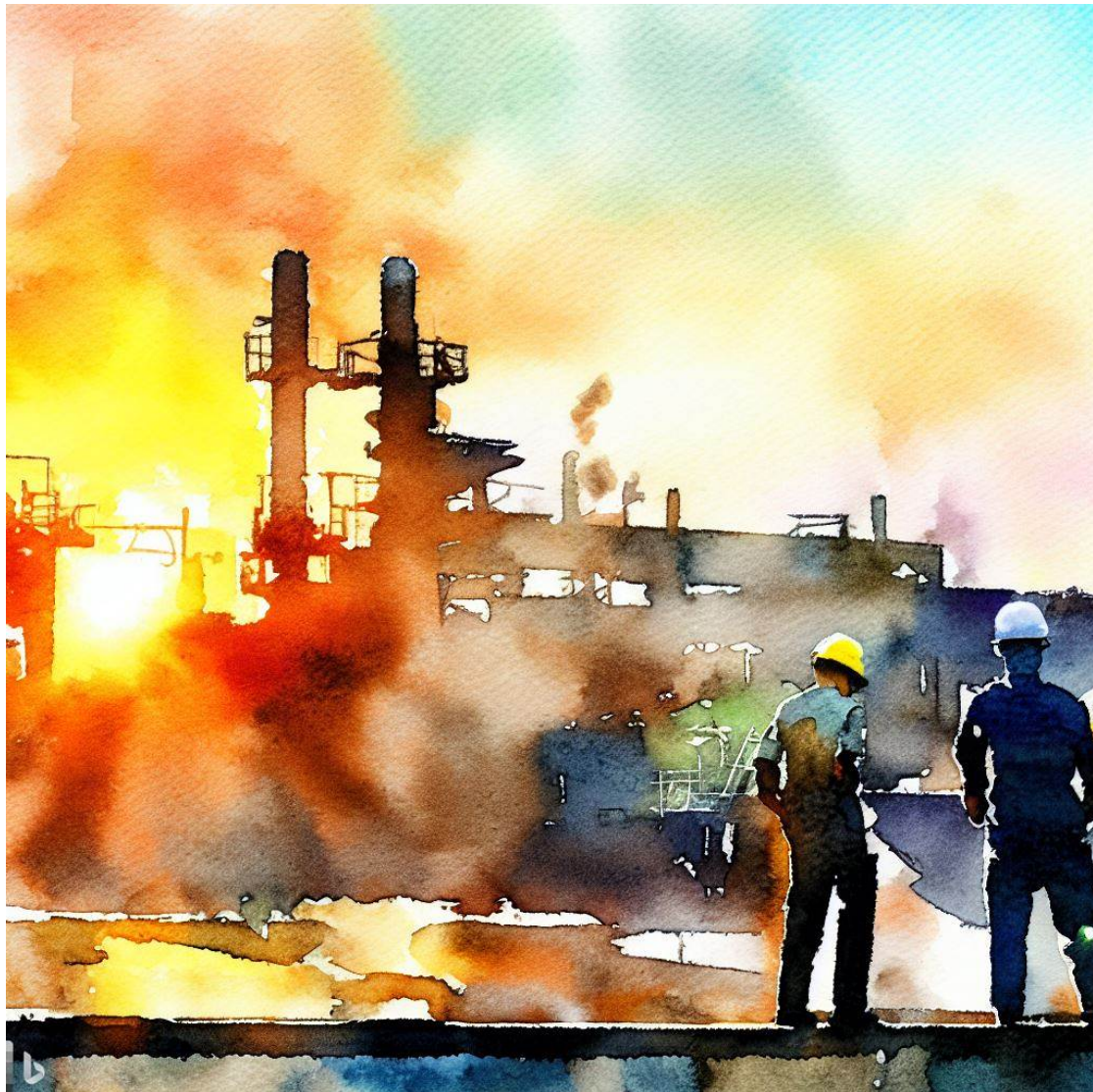
Category III Vibration

ISO 18436-2

The Category III vibration course meets and exceeds the requirements of ISO 18436-2. It is intended for students who have passed Category II and wish to delve deeper into vibration analysis, manage CBM programs or work as vibration consultants. 36 months of experience is required for certification.



4 Days
4 Hour Certification
Exam on Day 5



Take Your Career to the Next Level!

- > Specify Test Equipment
- > Establish CBM Programs
- > Set Acceptance Test Criteria
- > Conduct Advanced Analysis
 - Steady State and Transient
- > Conduct 2-Plane Balancing
- > Solve Resonance Problems
- > Get Paid More!

What Are People Saying?

“Alan is an expert at explaining technical concepts to non-technical people. He takes the time to make sure everyone’s questions are answered. Ample animations and videos make the concepts easier to understand. You will be surprised at how much you learn in this course!”

32+ Years
1000’s Trained
English + Spanish
Live Online + On-Site
Public + Private

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Course Schedule



ZencoVibrations.com/shop



ZENCO
VIBRATION EXPERTS



Category III Vibration

ISO 18436-2

Alan Friedman, aka the Vibe Guru, is the founder and CEO of Zenco and the author of "Audit it. Improve it: Getting The Most from Your Vibration Monitoring Program."



Alan is Cat IV Certified. He has taught 1000's of students worldwide for over 32 years in both English and Spanish and he has visited hundreds of industrial sites of all types to set up condition monitoring programs. All courses are taught by Alan personally.



Partial Topic List

Managing Condition Monitoring

- ISO Standards
- KPI's
- IIoT, Industry 4.0, Machine Learning, AI

Condition Monitoring Technologies

- Electric Motor Testing
- IR Thermography
- Ultrasound
- Lube Oil Analysis
- Wear Particle Analysis
- Vibration systems, wireless sensors, MEMs, CM architecture, remote monitoring

Signal Processing

- Signal processing block diagram
- Filters
- A/D Conversion
- Sampling and Aliasing
- Dynamic Range S/N Ratio
- Windows, Averaging
- FFT
- Triggering
- Order Tracking

Phase Analysis

- True and Relative Phase
- Phase and Units
- High Spot and Heavy Spot
- Common faults with 1x phase (unbalance, misalignment, looseness, bent shaft, cocked bearing, eccentricity)
- Keyphasors

Natural Frequencies and Resonance

- Damped and Undamped Nat. Frequencies
- SDOF and MDOF systems in detail
- Bode and Nyquist plots
- Bump tests
- High spot and heavy spot
- Unbalance response

Structural Testing

- Operational Deflection Shapes (ODS)
- Motion Amplification
- Bump tests
- Modal Analysis / FEA
- FRF, Transmissibility, Isolation

Dealing with Resonance

Fault Detection

- Rolling element bearings
- Gears
- Journal Bearings (Orbits, centerline diagrams and transient analysis)

Corrective Action

- Alignment + Tolerances
- Balancing (vectors, trial weights, 1 and 2 plane balancing)
- No phase balancing
- Balance standards
- Safety

Acceptance Testing

- Test procedures

Standards, Alarms and Reporting

- ISO, IEC, API etc.
- Advanced alarms and diagnostics
- Fault severity determination
- Trending
- Acting on reports

Learn!
Get Certified!
Earn More!



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