Global Horizon
TRAINING CENTER

Training Course:
Rotating Equipment Vibration Analysis

23 - 27 November 2025
In-House

Training Course:
Rotating Equipment Vibration Analysis

Training Course code: EN236098 From: 23 - 27 November 2025 Venue: In-House - Training Course Fees: 35000 Euro

Introduction:

Rotating machinery is a backbone of industrial operations, and unexpected failures can lead to costly downtimes. Vibration analysis is one of the most effective tools for condition monitoring and predictive maintenance. This 5-day training program, designed by Global Horizon Training and Consulting Center, equips participants with practical knowledge and analytical skills to monitor, diagnose, and resolve vibration issues in rotating equipment such as pumps, compressors, turbines, motors, and fans.

Objectives:

By the end of this course, participants will be able to:

- Understand the fundamentals of vibration and its significance in rotating equipment.
- Identify common causes of vibration and mechanical faults.
- Use vibration monitoring tools and interpret frequency spectra.
- Diagnose machinery problems such as unbalance, misalignment, and bearing defects.
- Apply vibration analysis in predictive maintenance programs.

Course Methodology:

- Technical lectures and animation-supported visuals
- Real-world case studies and fault simulations
- Hands-on exercises using vibration data and signal interpretation
- Instrument demonstrations accelerometers, FFT analyzers, etc.
- Interactive sessions and group diagnostics

Organizational Impact:

- Increased reliability and uptime of critical rotating machinery
- Early detection of mechanical failures and cost-effective maintenance
- Reduced risk of catastrophic breakdowns

- Strengthened predictive maintenance capability

Target Audience:

- Mechanical and Maintenance Engineers
- Reliability Engineers and Vibration Analysts
- Plant Engineers and Condition Monitoring Technicians
- Operations and Technical Supervisors
- Anyone involved in rotating equipment maintenance or diagnostics

Outlines:

Day 1:

Basics of Vibration and Rotating Equipment

- Introduction to vibration and waveforms
- Key terms: frequency, amplitude, phase
- Types of rotating equipment and failure modes
- Standards and tolerances ISO 10816, API, etc.

Day 2:

Vibration Measurement and Instrumentation

- Vibration sensors: accelerometers, velocity probes, displacement probes
- Data acquisition and signal processing
- Introduction to spectrum analysis FFT
- Time waveform vs. frequency spectrum

Day 3:

Vibration Analysis and Common Faults

- Unbalance, misalignment, looseness
- Resonance and critical speed phenomena

- Gearbox, bearing, and coupling faults
- Case studies of real-world vibration problems

Day 4:

Diagnostic Techniques and Trend Analysis

- Orbit and phase analysis
- Envelope detection and demodulation
- Trending vibration data and baseline development
- Alarm levels and severity grading

Day 5:

Predictive Maintenance and Case Studies

- Integration of vibration analysis in PdM programs
- Condition-based maintenance strategies
- Vibration report writing and recommendations
- Final group exercise: diagnosis and action plan
- Review of major case studies from various industries

Registration form on the Training Course: Rotating Equipment Vibration Analysis

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

Delegate Information

Full Name (Mr / Ms / Dr / Eng): .....
Position: .....
Telephone / Mobile: .....
Personal E-Mail: .....
Official E-Mail: .....

Company Information

Company Name: .....
Address: .....
City / Country: .....

Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng): .....
Position: .....
Telephone / Mobile: .....
Personal E-Mail: .....
Official E-Mail: .....

Payment Method

- ☐ Please find enclosed a cheque made payable to Global Horizon
- ☐ Please invoice me
- ☐ Please invoice my company

Easy Ways To Register

Telephone: +201095004484 to provisionally reserve your place.	Fax your completed registration form to: +20233379764	E-mail to us : info@gh4t.com or training@gh4t.com	Complete & return the booking form with cheque to:Global Horizon 3 Oudai street, Aldouki, Giza, Giza Governorate, Egypt.