TECHNICAL
EDUCATION
ACADEMY

School of Engineering

COURSE PROGRAMME

000700

Machinery Vibration Analysis

The course covers the diagnosis of vibration conditions in oil and gas equipment and methods for eliminating excessive vibration.



Learn from the Best in the Business!

Course overview

Duration: 5 days / 40 hours · Intermediate level

Why take this course

The course covers the diagnosis of vibration conditions in oil and gas equipment and methods for eliminating excessive vibration. The material is presented in a logical sequence and structured for easy study and thorough understanding by participants. The aim of the course is to help learners master the material related to vibration processes in the operation of oil and gas equipment.

This course will be of interest to engineers involved in the operation, control, diagnosis, and monitoring of oil and gas equipment, as well as a wide range of specialists in the oil and gas sector.

To enhance the quality of information transfer, an interactive combination of lectures and seminars will be used. Seminars will begin with raising the most relevant questions and motivating all attendees to find the correct answers. Delegates will also have the opportunity to ask their own questions and participate in developing correct answers using their own analysis and experience.

Who it is for and how it helps

Vibration diagnostics engineers and a wide range of specialists in the oil and gas sector

What you will learn

- Explain the physical and physiological characteristics of vibration and general information about oscillations
- Formulate equations for the oscillations of dynamic systems
- Measure the amplitude of vibrations and oscillations of machines. Perform vibration monitoring
- Process and analyze signals using analog and digital systems
- Process and analyze vibration measurement results using various methods
- Perform balancing procedures, including on-site balancing techniques
- Balance rotors on-site
- Apply vibration tuning in production to prevent excessive vibration
- Use vibration isolation and dynamic vibration dampers in practice
- Implement preventive measures to reduce and eliminate mechanical vibration in equipment

Pre-course requirements

- Basic knowledge of mechanical vibration

Programme instructor



Ahmed AbdelAty

An accomplished Mechanical Engineer and Technical Instructor with over two decades of expertise in rotating equipment, reliability engineering, and asset integrity management across the oil and gas, petrochemical, and industrial sectors. Recognized as a Certified Asset Management Assessor (CAMA-2) and Machinery Lubrication Engineer (ICML), with advanced certifications in Vibration Analysis (CAT III), Thermography, and RCM.

An experienced instructor, having designed and delivered specialized training programs in vibration analysis, dynamic balancing, reliability-centered maintenance, asset integrity, and mechanical systems for leading clients including ARAMCO, SABIC, ADNOC, KNPC, OQ8, and ENI. Adept at customizing training to client-specific assets and challenges, and mentoring engineers and technicians in applying reliability engineering tools and diagnostic techniques.

Qualifications:

Certified CAMA-2 – Certified Asset Management Assessor
Certified AIMS – ISO Asset Integrity Management System
Certified Vibration Analyst – Level III
Certified MLE – Machinery Lubrication Engineer
Certified MLA-II – Machinery Lubrication Analyst
Certified Thermographer – ITC
Certified RCA Practitioner – American University in Cairo (AUC)

Participant ratings

Programme evaluation based on participant feedback

Overall programme rating — 5.0 / 5

Clarity of learning objectives	**4.9 / 5**
Confidence in applying knowledge and skills	**4.5 / 5**
Achievement of learning objectives	**4.6 / 5**
Relevance of content to job tasks	**4.8 / 5**
Suitability of difficulty for the level of preparation	**4.5 / 5**
Increase in knowledge	**4.8 / 5**
Skills development	**4.6 / 5**
Willingness to recommend the programme to colleagues	**4.8 / 5**

8 responses

Joining the programme

Contact the Academy and quote course code 000700 to confirm dates, delivery format, prices and enrolment terms.

Training for your team

Tell us your business goals, the roles and number of participants, and your preferred dates and location. This will help us discuss the right training option.

Preparing for the programme

Read the pre-course requirements in this programme before enrolling.

Discuss your training needs

mail@tecedu.org
www.tecedu.academy

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