COURSE OVERVIEW RE0802-4D
Condition Monitoring (V-CAT1)
(Mobius Institute)

Course Title
Condition Monitoring (V-CAT1)
(Mobius Institute)

Course Date/Venue
August 16-19, 2026/Tourath Meeting Room, Al Bandar Rotana Creek, Dubai, UAE

Course Reference
RE0802-4D

Course Duration/Credits
Four days/3.0 CEUs/30 PDHs

Course Description

This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators.

Category I is the ideal starting place for new vibration analysts, those who are collecting data and those who want a better understanding of vibration analysis and condition monitoring. Participants will have a solid understanding of why we monitor the condition of rotating machinery and other critical assets, the importance of improved reliability and how vibration can be successfully measured and analyzed to provide an early warning of a wide range of fault conditions.

This course is designed to provide participants with a detailed and up-to-date overview of ISO Vibration Analyst Category I in accordance with ISO 18436-2. It covers the maintenance practices and condition monitoring; the principles of vibration, vibration measurement, time waveform and spectrum; the brief introduction to phase and signal processing; the vibration analysis and spectrum analysis process; the quick introduction of resonance; diagnosing of common fault conditions covering unbalance, misalignment, rolling element bearing failure, looseness and resonance; and setting alarm limits.

Course Objectives/Outcomes & Benefits for the Participants

Upon the successful completion of this course, each participant will be able to:-

- Get certified as a "*Vibration Analyst: Category I*" in accordance with ISO 18436-2 standards from Mobius Institute
- Carryout reactive, preventive, condition-based and proactive maintenance practices
- Employ condition monitoring and ultrasound, infrared, oil analysis, wear particle analysis and electric motor testing
- Discuss the principles of vibration comprising of waveforms and metrics
- Apply vibration measurement through vibration sensors, vibration units, mounting, naming conventions, repeatability and quality, vibration axes, routes and detecting and avoiding poor data
- Explain time waveform, spectrum, forcing frequencies and phase
- Illustrate signal processing covering analyzer settings, Fmax, resolution and spectral averaging
- Apply vibration analysis, diagnosing common fault condition and setting alarm limits

Who Should Attend

This course provides an overview of all significant aspects and considerations of ISO vibration analysis for maintenance, reliability, rotating equipment, process, control and instrumentation personnel who are willing to gain, improve and/or update their knowledge and skills of practical aspects of machinery vibration monitoring, analysis and predictive maintenance. Mechanical and electrical engineers, maintenance supervisors, electrical supervisors, mechanical supervisors, mechanical foremen, specialists and other technical staff will also benefit from this course.

Exam Eligibility & Structure

Exam candidates shall have the following minimum prerequisites:-

- At least Secondary School Graduation Diploma or its equivalent
- Minimum 6 months of Vibration Analysis experience, verified by an independent person
- Pass the exam

Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

30% Lectures
20% Practical Workshops & Work Presentations
30% Hands-on Practical Exercises & Case Studies
20% Simulators (Hardware & Software) & Videos

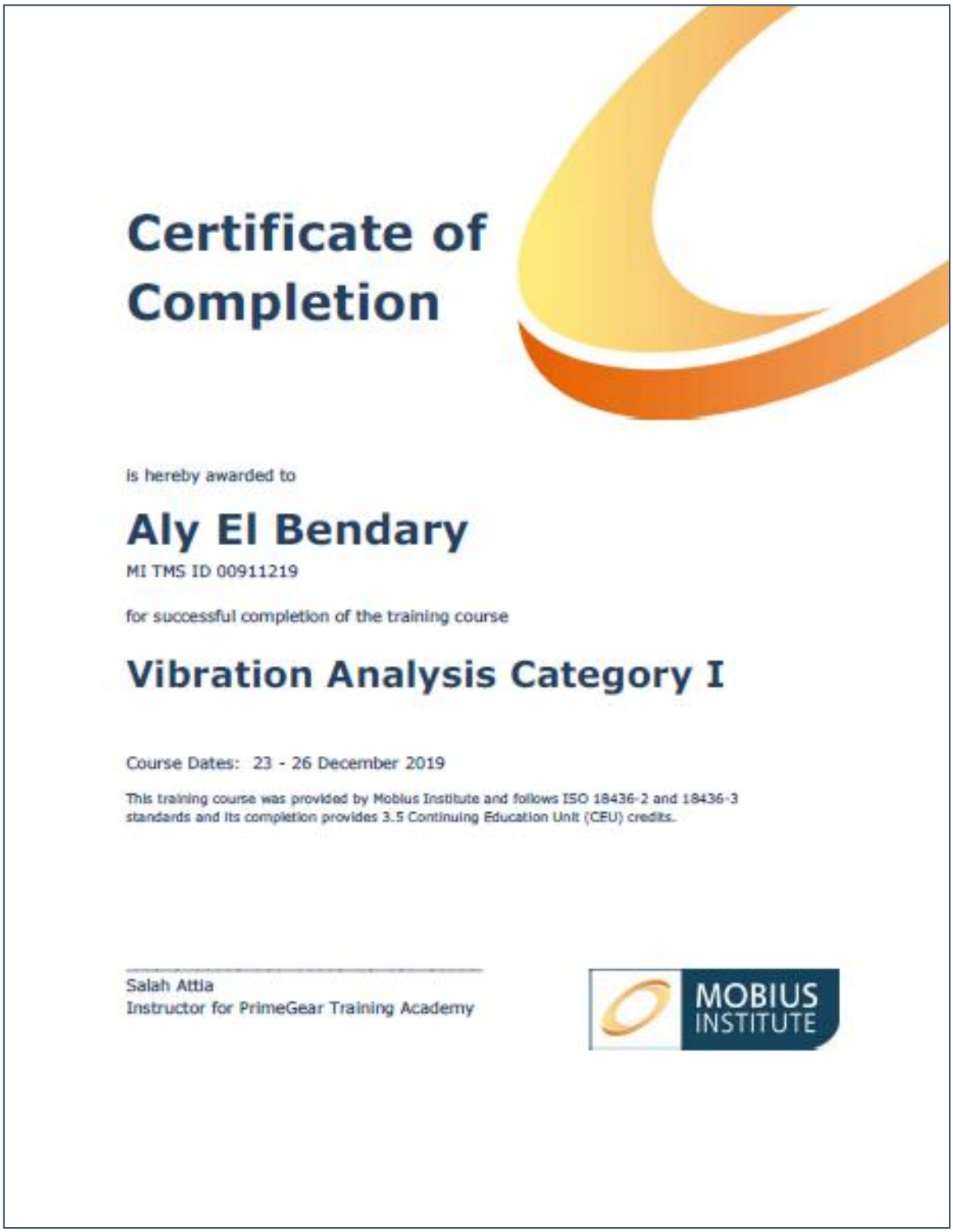
In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Learning Design & Customization

This course can be customized to the exact requirements of clients. Haward Technology is so proud of our huge capabilities in tailoring our courses to the training needs of our valued clients.

Course Certificate(s)

(1) Internationally recognized certificates will be issued to all participants of the course.



Certificate of Completion

is hereby awarded to

Aly El Bendary

MI TMS ID 00911219

for successful completion of the training course

Vibration Analysis Category I

Course Dates: 23 - 26 December 2019

This training course was provided by Mobius Institute and follows ISO 18436-2 and 18436-3 standards and its completion provides 3.5 Continuing Education Unit (CEU) credits.

Salah Attia
Instructor for PrimeGear Training Academy

MOBIUS INSTITUTE

(2) Mobius Institute will certify the participants who will pass the examination for ***Vibration Analyst: Category I***

MOBIUS INSTITUTE
BOARD of CERTIFICATION

MOBIUS INSTITUTE
BOARD OF CERTIFICATION

certifies that

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has met the experience, training and examination requirements for conformity to ISO 18436-2 as

VIBRATION ANALYST: CATEGORY I

ISO/IEC 17024 accredited in accordance with ISO 18436-1

This certificate remains the property of Mobius Institute Board of Certification.

www.mobiuscertification.org

Certification Number: M-2907-01
Date of Certification: 27-Jan-2014
Certification Expires: 27-Jan-2019

Jason Tranter, Managing Director
Mobius Institute Board of Certification

(3) Official Transcript of Records will be provided to the successful delegates with the equivalent number of ANSI/IACET accredited Continuing Education Units (CEUs) earned during the course.

Haward Technology Middle East

Continuing Professional Development (HTME-CPD)

CEU Official Transcript of Records

TOR Issuance Date: 13-Nov-25

HTME No. 74851

Participant Name: Waleed Al Habeeb

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
RE0802-4D	Condition Monitoring (V-CAT1) (Mobius Institute)	Nov 10-13, 2025	30	3.0

Total No. of CEU's Earned as of TOR Issuance Date **3.0**

TRUE COPY

Jaryl Castillo
Academic Director

Haward Technology has been approved as an Accredited Provider by the International Association for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this approval, Haward Technology has demonstrated that it complies with the ANSI/IACET 1-2018 Standard which is widely recognized as the standard of good practice internationally. As a result of their Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for programs that qualify under the ANSI/IACET 1-2018 Standard.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking Continuing Education Units (CEUs) in accordance with the rules & regulations of the International Association for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology is accredited by

P.O. Box 26070, Abu Dhabi, United Arab Emirates | Tel.: +971 2 3091 714 | E-mail: info@haward.org | Website: www.haward.org

Certificate Accreditations

Haward's certificates are accredited by the following international accreditation organizations: -

- Mobius Institute Board of Certification (MIBoC) Scheme

  Mobius Institute Board of Certification (**MIBoC**) is ISO/IEC 17024 and ISO 18436-1 accredited and provides globally recognised certification for Vibration Analysis, Infrared Thermography, Ultrasound and Asset Reliability. MIBoC is an impartial and independent entity that is directed by scheme and technical committees to ensure that its certification meets or exceeds the requirements defined by the applicable ISO standards. Haward Technology is a partner of various Mobius Training Partners.

- British Accreditation Council (BAC)

  Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. Haward's certificates are internationally recognized and accredited by the British Accreditation Council (BAC). BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

- The International Accreditors for Continuing Education and Training (IACET - USA)

  Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

  Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units** (CEUs) in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

  Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:

Mr. Riyadh Bsiso, MBA, BSc, ISO-VA, ADNT-NDT, LEEA, is a **Senior Mechanical Engineer** with extensive years of industrial experience within the **Oil & Gas**, **Refinery** and **Petrochemical** industries. His expertise widely covers in the areas of **Machine Reliability**, **Rotating Equipment** Faults & Malfunctions Troubleshooting, **Diagnostic** Techniques, **Vibration** Analysis, **Oil** Analysis, **Boroscopy & Corrective Actions**, Machinery **Balancing**, Machinery **Alignment**, **Vibration** Isolation, Resonance Control, Structural Analysis, **Modal** Testing Techniques, ODS Testing, **Torsional Vibration** Measurements, **Condition Monitoring** Systems, **Machinery** Fault Diagnostics, **Bearing** Technology, Mounting & Dismounting of **Roller Element Bearings** and Machine Diagnostic. He is also well versed in MS Office (Word, Excel, Power Point), AutoCAD, Mechanical Desktop & AutoDesk, Matlab, Ansys, Simulink, Vibration Analysis & Machinery Diagnostics Software - SPM Instruments, GE Scouts, SPM Intellinova, FAG Bearing Analyzer III, Detector III, FAG DetectX1s, FAG ProCheck, FAG Pro Torq, Bearinx - Bearing Calculation Software, ADRETM software (GE Bentley Nevada PL), VB8 – Commtest, and ERP (CRM, Salesforce, Service & Sales Management Modules).

During his career life, Mr. Riyadh has gained his practical and field experience through his various significant positions and dedication as the **Technical Manager**, **Sales & Services Manager**, **Managing Partner**, **Manager Technical/Business Development**, **Mechanical Engineer** - Condition Monitoring & Machine Diagnostic, **Condition Monitoring Engineer** and **Certified Trainer/Instructor** for UPDS, Samir Odeh Engineering Solutions and Schaeffler, just to name a few.

Mr. Riyadh has a **Master's** degree in **Business Administration** (Quality & Innovation Management) from the **University** of **Leicester**, **UK**, a **Bachelor's** degree in **Mechanical Engineering** (**Mechatronics**) and a **Diploma** in **IAM** Engineering Services, Roller Bearing Maintenance & Application Engineering. Further, he is an **Authorized Mobius ISO Category I-IV Instructor/Examiner** and has delivered numerous trainings, courses, seminars, conferences and workshops internationally.

Training Fee

US$ 4,500 per Delegate + **VAT**. This rate includes buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Exam Fee

US$ 480 per Delegate + **VAT**.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1: ***Sunday, 16th of August 2026***

0730– 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 1030	***Maintenance Practices*** *Reactive, Preventive, Condition-Based, Proactive • How to Decide Between Them*
1030 – 1045	*Break*
1045 – 1200	***Condition Monitoring*** *Why It Works • Ultrasound, Infrared, Oil Analysis, Wear Particle Analysis & Electric Motor Testing*
1200 – 1300	*Lunch*
1300 – 1430	***Principles of Vibration*** *Waveforms • Metrics: Overall Levels, RMS, PK, PK-to-Peak & Crest Factor*
1430 – 1445	*Break*
1445 – 1650	***Introduction to Vibration Measurement*** *Vibration Sensors: Displacement, Velocity & Acceleration • Vibration Units • Mounting: Where & How? • Naming Conventions • Repeatability & Quality • Vibration Axes: V, H, A & T • What are ''Routes'' & How do you Create Them? • Detecting & Avoiding Poor Data*
1650 – 1700	***Recap***
1700	*End of Day One*

Day 2: ***Monday, 17th of August 2026***

0730 – 0930	***An Introduction to the Time Waveform***
0930 – 0945	*Break*
0945 – 1200	***An Introduction to the Spectrum***
1200 – 1300	*Lunch*
1300 – 1430	***Introduction to Forcing Frequencies***
1430 – 1445	*Break*
1445 – 1650	***A Brief Introduction to Phase***
1650 – 1700	***Recap***
1700	*End of Day Two*

Day 3: ***Tuesday, 18th of August 2026***

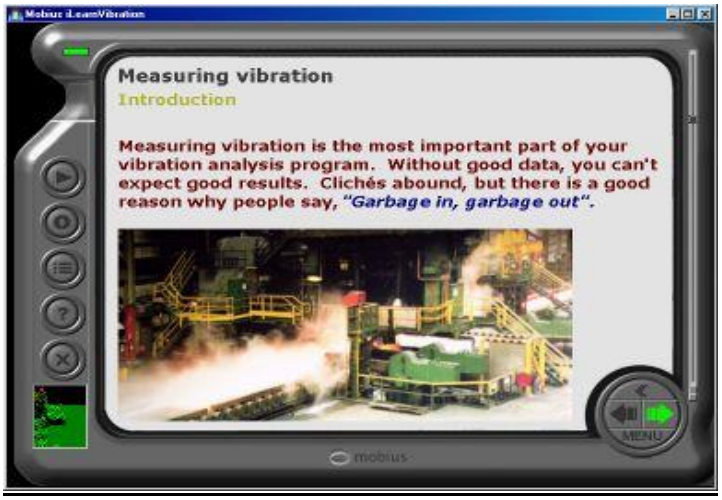
0730 – 0930	***Signal Processing (Just the Absolute Basics)*** *A Quick Tour of your Analyzer Settings • Fmax*
0930 – 0945	*Break*
0945 – 1200	***Signal Processing (Just the Absolute Basics) (cont'd)*** *Resolution • Spectral Averaging*
1200 – 1300	*Lunch*
1300 – 1430	***Vibration Analysis*** *The Spectrum Analysis Process*
1430 – 1445	*Break*
1445 – 1650	***What is Resonance? A Quick Introduction***
1650 – 1700	***Recap***
1700	*End of Day Three*

Day 4: ***Wednesday, 19th of August 2026***

0730 – 0930	***Diagnosing Common Fault Conditions*** *Unbalance • Misalignment • Rolling Element Bearing Failure • Looseness • Resonance*
0930 – 0945	*Break*
0945 – 1200	***Setting Alarm Limits***
1200 - 1300	*Lunch*
1300 – 1415	***Review***
1415 – 1430	*Break*
1430 – 1630	***Mobius COMPETENCY EXAM (2 Hours)***
1630 – 1645	***Course Conclusion***
1645 - 1700	*Presentation of Course Certificates*
1700	*End of Course*

Simulator (Hands-on Practical Sessions)

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using the state-of-the-art simulator "iLearnVibration".



iLearnVibration Simulator

Course Coordinator

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