Haward Technology Middle East

COURSE OVERVIEW RE0628-3D
Certified Machinery Lubrication Technician (MLT) Level-I
ICML-MLT Certification

Course Title
Certified Machinery Lubrication Technician (MLT) Level-I: *ICML-MLT Certification*

Course Date/Venue
June 22-24, 2025/Tourath Meeting Room, Al Bandar Rotana Creek, Dubai UAE

1.8 CEUs (18 PDHs) AWARD

Course Reference
RE0628-3D

Course Duration/Credits
Three days/1.8 CEUs/18 PDHs

Online Exam Window
As per ICML Schedule

Course Description

This practical and highly-interactive course includes real-life case studies and exercises where participants will be engaged in a series of interactive small groups and class workshops.

This course is designed to provide participants with a detailed and up-to-date overview of Certified Machinery Lubrication Technician (MLT) Level-I. It covers the maintenance strategy and the lubrication theory covering tribology fundamentals, functions of a lubricant, hydrodynamic lubrication, elasto-hydrodynamic lubrication and mixed-film lubrication; and the lubricants comprising of base-oils, additives and their functions, physical, chemical, performance properties and classifications of oil lubricant and grease lubricant, grease lubrication, thickener types and thickener compatibility.

During this interactive course, participants will learn the lubricant selection, lubricant application, preventive and predictive maintenance; the lube condition control for filtration and separation technologies, filter rating, filtration system design and filter selection; the lube storage and management; the lubricant receiving procedures, proper storage, inventory management, lube storage containers, proper storage of grease-guns and other lube application devices; the maintenance of automatic grease systems; and the health and safety assurance.

Course Objectives

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

- Get certified as a *"Machinery Lubrication Technician (MLT) Level - I"* from the International Council for Machinery Lubrication (ICML)
- Carryout maintenance strategy as well as discuss the lubrication theory covering tribology fundamentals, functions of a lubricant, hydrodynamic lubrication, elasto-hydrodynamic lubrication and mixed-film lubrication
- Describe lubricants comprising of base-oils, additives and their functions, physical, chemical, performance properties and classifications of oil lubricant and grease lubricant, grease lubrication, thickener types and thickener compatibility
- Employ lubricant selection, lubricant application, preventive and predictive maintenance
- Apply lube condition control for filtration and separation technologies, filter rating, filtration system design and filter selection
- Perform lube storage and management and implement lubricant receiving procedures, proper storage, inventory management, lube storage containers, proper storage of grease-guns and other lube application devices, maintenance of automatic grease systems as well as health and safety assurance

Exclusive Smart Training Kit - H-STK®

*Participants of this course will receive the exclusive "Haward Smart Training Kit" (**H-STK®**). The **H-STK®** consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.*

Who Should Attend

This course provides an overview of all significant aspects and considerations of machine lubrication for all maintenance and reliability professionals including maintenance engineers, reliability engineers, lubricant analysts, lubrication technicians, craftsmen and millwrights, equipment operators, maintenance supervisors, predictive maintenance technicians, lubricant industry professionals and laboratory analysts.

Exam Eligibility & Structure

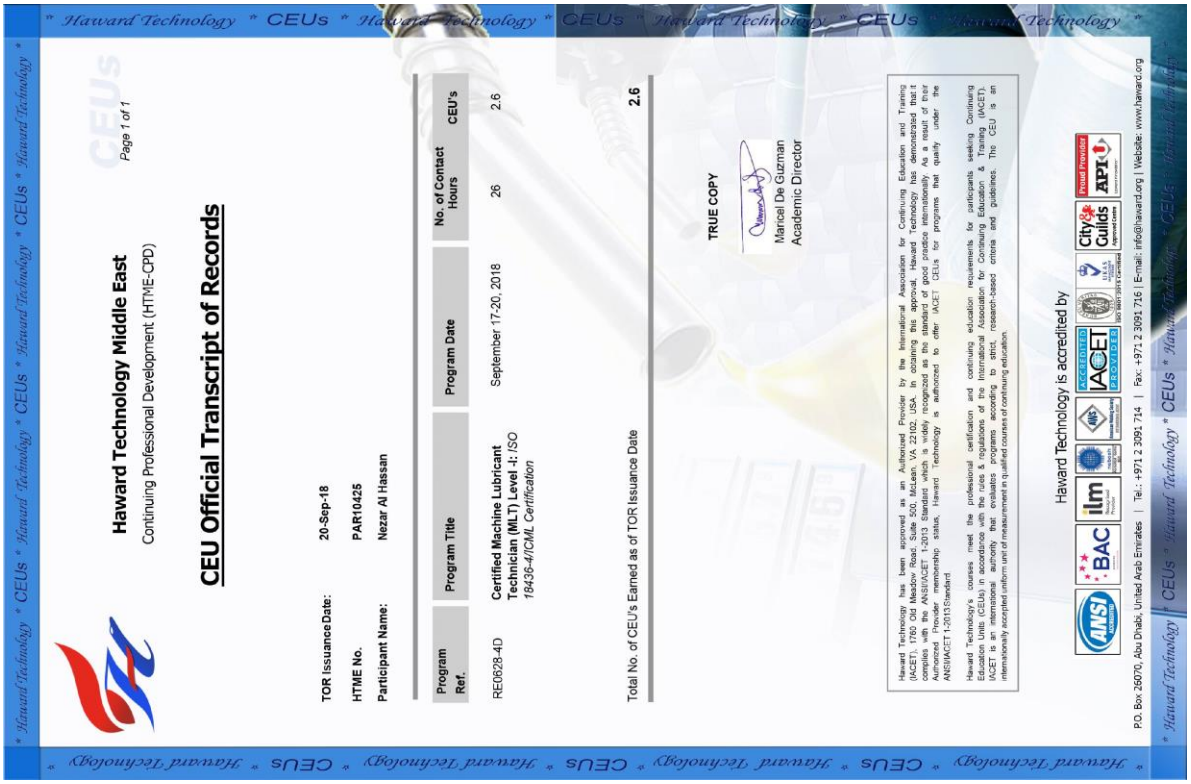
Exam candidates shall have the following minimum pre-requisites:-

- **Education and/or Experience** - Candidates must have at least two years education (post-secondary) or on-the-job training in one or more of the following fields: machine lubrication, engineering, mechanical maintenance and/or maintenance trades.
- **Training** - Candidate must have received 16 hours of documented formal training in machinery lubrication as outlined in the Body of Knowledge of the MLT I. For online or recorded training, exercises, practice exams, and review exercises may be included in the training time total but shall not exceed three hours of the required course time. Candidate shall be able to provide a record of this training to ICML that shall include the candidate's name, the name and signature of the instructor, the dates of the training, and the number of hours spent in the training.
- **Examination** - Each candidate must successfully pass a 100 question, multiple-choice examination that evaluates the candidate's knowledge of the topic. Candidates have three hours to complete the closed-book examination. A score of 70% is required to pass the examination and achieve certification.

Course Certificate(s)\

(1) ICML certificates will be issued to participants who have successfully completed the course and passed the exam. Successful candidate will be certified as a *"Machinery Lubrication Technician (MLT) Level - I"*.

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



Certificate Accreditations

Haward Technology is accredited by the following international accreditation

- International Council for Machinery Lubrication (ICML)

  This Machinery Lubrication Technician Certification course complies with the **ICML** (**International Council for Machinery Lubrication**) regulation and is designed to certify successful participant as a Machinery Lubrication Technician (MLT).

- British Accreditation Council (BAC)

  Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. 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 **1.8 CEUs** (Continuing Education Units) or **18 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.

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. Martin Williamson, PE, BSc, CMRP, MLE, MLA III, MLT II, is an **International Authority** in **Machinery Lubrication**, **ICML Certification** and **ISO 18436 Standards** with over **30 years** of practical experience. He is an **ICML Authorized Instructor & Consultant**. His wide expertise covers **Machinery Lubrication**, **ICML Certification**, **ISO 18436-4**, **ISO Standards Development**, **Condition Monitoring**, **Vibration & Oil Analysis**, **Contamination Monitoring, Tribology**, **Reliability Engineering** and **Scheduling Design**. He is currently the **Managing Director** of **KEW Engineering Ltd**. and a **Co-Director** of **Uptime 101 Pte Ltd**. that provides reliability and maintenance best practices engineering consulting and training services to the **petrochemical**, **oil**, **gas** and allied industries in **Europe**, **Australia**, **North America**, the **Middle East**, **Asia** and **South African** regions.

For the last 20 years, Mr. Williamson has been presenting training classes and undertaking consulting projects on an international level on behalf of **Noria Corporation** and other key clients such as **BP**, **Dow Corning**, **Marathon Oil** and **Cargill**. Since he attained his **CMRP** (Certified Maintenance & Reliability Professional) status, he has been involved with **ICML** (International Council for Machinery Lubrication) as an **ICML Authorized Instructor & Consultant** and is working on various related **ISO** working groups. Prior to this, he gained his remarkable experience for being the **General Manager** in Noria UK Limited (UK), **Oil Analysis Product Manager** in Rockwell Automation Entek (UK), **Senior Technical Support Engineer** in Pall Europe Limited (UK) and **Mechanical Engineer** in ISCOR Ltd.

Mr. Williamson is a **Professional Engineer** and has a **Bachelor's** degree in **Mechanical Engineering**. Further, he is a **Member** of the **Board** of the **ICML**, a **Certified CMRP** (Maintenance & Reliability Professional) from the Society of Maintenance & Reliability Professionals (**SMRP**) and a **Certified MLA III** (Machinery Lubricant Analyst), a **Certified MLT II** (Machinery Lubricant Technician) and a **Certified MLE I** (Machine Lubricant Expert) from the International Council for Machinery Lubrication (**ICML**). He is also a **Certified Instructor/Trainer** and a **Certified Trainer** for **BOSIET** (Basic Off-Shore Safety Induction and Emergency Training) and **HUET** (Helicopter Underwater Evacuation Training). He has further delivered numerous trainings, courses, seminars, workshops and conference internationally.

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.

Course Fee

US$ 4,500 per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Exam Fee

US$ 320 per Delegate + **VAT**.

Accommodation

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

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

0730 – 0800	*Registration & Coffee,*
0800 - 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0930	***Maintenance Strategy*** *Why Machines Fail ● The Impact of Poor Maintenance on Company Profits ● The Role of Effective Lubrication in Failure Avoidance*
0930 – 0945	*Break*
0945 – 1145	***Lubrication Theory*** *Fundamentals of Tribology ● Functions of a Lubricant ● Hydrodynamic Lubrication (Sliding Friction) ● Elasto-Hydrodynamic Lubrication (Rolling Friction) ● Mixed-Film Lubrication*
1145 – 1200	*Break*
1200 – 1300	***Lubricants*** *Base-Oils ● Additives & their Functions ● Oil Lubricant Physical, Chemical & Performance Properties & Classifications*

1300 – 1420	***Lubricants (cont'd)*** *Grease Lubrication (How Grease is Made?, Thickener Types, Thickener Compatibility, Grease Lubricant Physical, Chemical & Performance Properties & Classifications)*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day One*

Day 2

0730 – 0930	***Lubricant Selection*** *Viscosity Selection • Base-Oil Type Selection • Additive System Selection • Machine Specific Lubricant Requirements (Hydraulic Systems, Rolling Element Bearings, Journal Bearings, Reciprocating Engines, Gearing & Gearboxes) • Application & Environment Related Adjustments*
0930 – 0945	*Break*
0945 – 1045	***Lubricant Application*** *Basic Calculations for Determining Required Lubricant Volume • Basic Calculations to Determine Re-Lube & Change Frequencies*
1045 – 1230	***Lubricant Application (cont'd)*** *When to Select Oil; When to Select Grease? • Effective Use of Manual Delivery Techniques*
1230 – 1245	*Break*
1245 – 1420	***Lubricant Application (cont'd)*** *Automatic Delivery Systems (Automated Deliver Options [Automated Grease Systems, Oil Mist Systems, Drip & Wick Lubricators]; Deciding When to Employ Automated Lubricators; Maintenance of Automated Lubrication Systems)*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Two*

Day 3

0730 – 0930	***Preventive & Predictive Maintenance*** *Lube Routes & Scheduling • Oil Analysis & Technologies to Assure Lubrication Effectiveness • Equipment Tagging & Identification*
0930 – 0945	*Break*
0945 - 1145	***Lube Condition Control*** *Filtration & Separation Technologies • Filter Rating • Filtration System Design & Filter Selection*
1145 - 1230	***Lube Storage & Management*** *Lubricant Receiving Procedures • Proper Storage & Inventory Management • Lube Storage Containers*
1230 - 1245	*Break*

1245 – 1345	***Lube Storage & Management (cont'd)*** *Proper Storage of Grease-Guns & Other Lube Application Devices ● Maintenance of Automatic Grease Systems ● Health & Safety Assurance*
1345 – 1400	***Course Conclusion*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course*
1400 - 1415	***POST-TEST***
1415 - 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

MOCK Exam

Upon the completion of the course, participants have to sit for a MOCK Examination similar to the exam of the Certification Body through Haward's Portal. Each participant will be given a username and password to log in Haward's Portal for the MOCK exam during the 30 days following the course completion. Each participant has only one trial for the MOCK exam within this 30-day examination window. Hence, you have to prepare yourself very well before starting your MOCK exam as this exam is a simulation to the one of the Certification Body.

Practical Sessions

This practical and highly-interactive course includes real-life case studies and exercises:-

Course Coordinator

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