COURSE OVERVIEW RE0230
REAM (Reliability, Engineering, Asset and Maintenance)

Course Title

REAM (Reliability, Engineering, Asset and Maintenance)

Course Date/Venue

Session 1: June 23-27, 2025/Meeting Plus 9, City Centre Rotana, Doha, Qatar
Session 2: November 16-20, 2025/Tamra Meeting Room, Al Bandar Rotana Creek, Dubai, UAE

Course Reference

RE0230

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs

Course Description

This practical 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

When properly executed, Physical Asset Management can significantly impact an organization's bottom line by reducing maintenance costs, increasing the economic life of capital equipment, reducing company liability, increasing the reliability of systems and components, and reducing the number of systems and components.

This course will provide participants with the tools and methodologies to achieve maintenance excellence in their organization. The course has been designed to help managers care for their assets efficiently and effectively through sound and timely decision-making.

Further, the course will also discuss the ISO 55000 including its elements, structure and requirements for an asset management system; the benefits of adopting ISO 55000 and how it align with other management systems; the roadmap to achieve certification and subsequent business improvement; the various approaches including HAZOP and risk-based inspection; the total productive maintenance (TPM), people-centric maintenance and quality improvement; the methodologies covering asset management of projects, quantum leaps in process improvement and supplier partnering program (SPP); and the failure process and age versus reliability patterns.

During this interactive course, participants will learn to optimize human and asset performance by focusing on behavior and results; carryout balance scorecards, benchmarking and key performance indicators; identify the basic economics and the aspects of discounted cash flow used in capital equipment replacement analysis; apply present-value calculation and recognize the effects of inflation in the analysis; estimate the interest rate appropriate for discounting; calculate the equivalent annual cost (EAC) and minimize life cycle cost; recognize basic statistics and the problem with uncertainty; optimize maintenance and replacement decisions covering network system reliability and maintenance tasks; employ reliability centered maintenance (RCM); and optimize condition based maintenance decisions.

Course Objectives

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

- Apply a proper physical asset management system in accordance with the ISO 55000/55001 standards in order to achieve a maintenance excellence position
- Discuss ISO 55000 including its elements, structure and requirements for an asset management system
- Explain the benefits of adopting ISO 55000 and how it align with other management systems
- Illustrate roadmap to achieve certification and subsequent business improvement
- Manage risk and apply the various approaches including HAZOP and risk-based inspection
- Manage reliability through people, total productive maintenance (TPM), people-centric maintenance and quality improvement
- Optimize methodologies covering asset management of projects, quantum leaps in process improvement and supplier partnering program (SPP)
- Define failure and identify failure process and age versus reliability patterns
- Optimize RCM results through root cause failure analysis (RCFA) and life cycle decisions
- Optimize human and asset performance by focusing on behavior and results
- Carryout balance score cards, benchmarking and key performance indicators
- Discuss basic economics and the aspects of discounted cash flow used in capital equipment replacement analysis
- Apply present-value calculation and identify the effects of inflation in the analysis
- Estimate the interest rate appropriate for discounting, calculate the equivalent annual cost (EAC) and minimize life cycle cost
- Recognize basic statistics and the problem with uncertainty
- Optimize maintenance and replacement decisions covering network system reliability and maintenance tasks
- Employ reliability centered maintenance (RCM) and optimize condition based maintenance decisions

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 physical asset management for maintenance excellence for engineers, managers of plant operations, facility managers or maintenance professionals who are responsible for maintaining and managing the physical equipment assets of his plant as well as those who represent large facilities and plants from industries such as mining, oil and gas, pulp and paper, utilities, primary metals and heavy manufacturing. The course is a must for those incharge of implementing a physical asset management system in accordance with the ISO 55000/55001 standards.

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

Doha	**US$ 6,000** per Delegate. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.
Dubai	**US$ 5,500** per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Accommodation

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

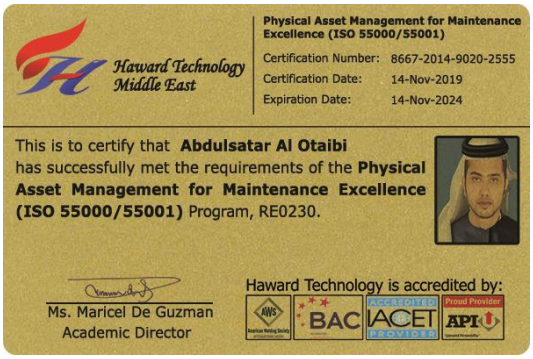
Course Certificate(s)

(1) Internationally recognized Competency Certificates and Plastic Wallet Cards will be issued to participants who completed a minimum of 80% of the total tuition hours and successfully passed the exam at the end of the course. Certificates are valid for 5 years.

Recertification is FOC for a Lifetime.

Sample of Certificates

The following are samples of the certificates that will be awarded to course participants: -



(2) 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)

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CEU Official Transcript of Records

TOR Issuance Date: 14-Nov-19

HTME No. 8667-2014-9020-2555

Participant Name: Abdulsatar Al Otaibi

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
RE0230	Physical Asset Management for Maintenance Excellence (ISO 55000/55001)	November 10-14, 2019	30	3.0

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

TRUE COPY

Maricel De Guzman
Academic Director

Haward Technology has been approved as an Authorized 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 1-2013 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 1-2013 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

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Certificate Accreditations

Certificates are accredited by the following international accreditation organizations:-

- 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 **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.

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. Dimitry Rovas, CEng, MSc, PMI-PMP, SMRP-CMRP, is a **Senior Maintenance Engineer** with extensive industrial experience in **Oil**, **Gas**, **Power** and **Utilities** industries. His expertise includes **Process Plant** Shutdown & Turnaround, **Maintenance** Optimization & Best Practices, **Maintenance** Auditing & Benchmarking, **Reliability** Management, **Reliability Centered Maintenance** Principles & Application, **Machinery Lubrication**, **Maintenance Planning & Scheduling**, **Coupling & Shaft Alignment** Techniques, **Maintenance** Management & Cost Control, **Preventive & Predictive Maintenance**, **Effective Reliability** Maintenance & Superior Maintenance Strategies, **Integrity & Asset** Management, Reliability, Availability & Maintainability (**RAM**), Total Plant Reliability Centered Maintenance, **Turnaround & Outages**, **Process Plant** Shutdown, Turnaround & Troubleshooting, **Shutdown & Turnaround** Management, **Integrity & Asset** Management, **Maintenance Management** Best Practices, **Material Cataloguing**, **Maintenance** Planning & Scheduling, Effective **Reliability Maintenance**, **Maintenance Contracting & Outsourcing**, **Maintenance Inventory**, **Materials** Management, **Mechanical & Rotating Equipment** Troubleshooting & Maintenance, **Rotating Equipment Reliability** Optimization, Computerized Maintenance Management System (**CMMS**), **Material Cataloguing & Specifications**, **Rotating Equipment** Maintenance & Troubleshooting, **Pump** Technology, **Pump** Selection & Installation, **Reciprocating & Centrifugal Compressors**, **Gas & Steam Turbines**, **Turbine** Operations, **Valves**, **Bearings & Lubrication**, Rubber Compounding, Elastomers, Thermoplastic, Industrial Rubber Products, Rubber Manufacturing Systems, **Heat Transfer**, **Vulcanization Methods**, **Energy Conservation**, **Energy Loss** Management, **Energy Saving**, **Thermal Power Plant** Management, **Cogeneration Power Plant** Installation & Commissioning, **Auxiliary Steam Boilers** Troubleshooting, **Piping Racks** (Steel Structure, Valves, Pipe Supports) Commissioning, **Firefighting** Systems, **Steel & Welded Tanks**, Aluminium Logistics Facilities (Cranes, Laydown Areas, Port Facilities, etc), Equipment Heavy Lifting, Long Term Storage of Equipment, **Heat Transfer**, **Fluid Mechanics**, **Heating & Cooling** Systems, **Heat Insulation** Systems, **Heat Exchanger & Cooling Towers**, **Mechanical Erection** and **Heavy Rotating Equipment**. He is currently the **Project Manager** wherein he is managing, directing and controlling all activities and functions associated with the domestic heating/cooling facilities projects.

During his life career, Mr. Rovas has gained his practical and field experience through his various significant positions and dedication as the **EPC Project Manager**, **Maintenance Manager**, **Mechanical Engineer**, **Field Engineer**, **Preventive Maintenance Engineer**, **Lead Rotating Equipment Commissioning Engineer**, **Construction Commissioning Engineer**, **Offshore Lead Maintenance Engineer**, **Researcher**, **Instructor/Trainer**, **Telecom Consultant** and **Consultant** from various companies such as the Mytilineos Aluminium Group, Podaras Engineering Studies, Metka and Diadikasia, S.A., **Hellenic Petroleum Oil Refinery** and COSMOTE.

Mr. Rovas is a **Chartered Engineer** of the **Technical Chamber** of **Greece**. Further, he has **Master** degrees in **Mechanical Engineering** and **Energy Production & Management** from the **National Technical University of Athens**. Moreover, he is a **Certified Instructor/Trainer**, a **Certified Maintenance and Reliability Professional** (**CMRP**) from the Society of Maintenance & Reliability Professionals (**SMRP**), a **Certified Project Management Professional** (**PMP**), a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management** (**ILM**) and a **Certified Six Sigma Black Belt**. He is an active member of Project Management Institute (**PMI**), Technical Chamber of Greece and Body of Certified Energy Auditors and has further delivered numerous trainings, seminars, courses, workshops and conferences internationally.

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	***Introduction to ISO 55000*** *Provides an Overview of the ISO 55000 Suite of International Standards*
0930 – 0945	*Break*
0945 – 1100	***Overview of ISO 55001*** *Elements ● Structure ● Requirements for an Asset Management System*
1100 – 1230	***Benefits of Adopting ISO 55000*** *The Business Case for ISO 55000 International Standards*
1230 – 1245	*Break*
1245 – 1420	***Achieving Certification*** *Roadmap to Achieving Certification and Subsequent Business Improvement*
1420 – 1430	***Recap***
1430	*Lunch & End of Day One*

Day 2

0730 – 0930	***Managing Risk*** *Risk and its Management – A Discussion of the Various Approaches Used, Including HAZOP and Risk-Based Inspection*
0930 – 0945	*Break*
0945 – 1100	***Managing Risk (cont'd)*** *Risk and its Management – A Discussion of the Various Approaches Used, Including HAZOP and Risk-Based Inspection (cont'd)*
1100 – 1230	***Managing Reliability through People*** *Total Productive Maintenance (TPM) – People-Centric Maintenance and Quality Improvement*
1230 – 1245	*Break*
1245 – 1420	***Managing Reliability through People (cont'd)*** *Total Productive Maintenance (TPM) – People-Centric Maintenance and Quality Improvement (cont'd)*
1420 – 1430	***Recap***
1430	*Lunch & End of Day Two*

Day 3

0730 – 0930	***Optimizing Methodologies*** *Asset Management of Projects*
0930 – 0945	*Break*
0945 – 1100	***Optimizing Methodologies (cont'd)*** *Quantum Leaps in Process Improvement – The Ten Essential Requirements for DESIGN and RAM (Reliability, Availability & Maintainability) ● Supplier Partnering Programme (SPP)*

1100 – 1230	***Optimizing Methodologies (cont'd)*** *Definition of Failure • The Failure Process • Age versus Reliability Patterns*
1230 – 1245	*Break*
1245 – 1420	***Optimizing Methodologies (cont'd)*** *Root Cause Failure Analysis (RCFA): Optimizing RCM Results • Optimizing Life Cycle Decisions*
1420 – 1430	***Recap***
1430	*Lunch & End of Day Three*

Day 4

0730 – 0930	***Optimizing Human and Asset Performance by Focusing on Behaviour and Results*** *Taking Stock of your Organization: Balanced Score Cards, Benchmarking and Key Performance Indicators*
0930 – 0945	*Break*
0945 – 1100	***Basic Economics*** *Aspects of Discounted Cash Flow used in Capital Equipment Replacement Analysis • Present-Value Calculations • The Effects of Inflation in the Analysis • Estimating the Interest Rate Appropriate for Discounting*
1100 – 1230	***Basic Economics (cont'd)*** *Calculating the Equivalent Annual Cost (EAC) • Minimizing Life Cycle Cost*
1230 – 1245	*Break*
1245 – 1420	***Basic Statistics*** *The Problem with Uncertainty • Dealing with Censored Data – Weibull Analysis, etc. • Where do you Place your Maintenance Efforts?*
1420 – 1430	***Recap***
1430	*Lunch & End of Day Four*

Day 5

0730 – 0930	***Optimizing Maintenance and Replacement Decisions*** *Network System Reliability • Maintenance Tasks*
0930 – 0945	*Break*
0945 – 1100	***Reliability Centered Maintenance (RCM)*** *RCM – The Analytical Decision Logic • Is RCM the Right Tool for you? • What can RCM Achieve? • What does it take to Implement RCM? • Reasons for the Failure of RCM • Capability Driven RCM*
1100 – 1200	***Group Exercise*** *An Opportunity to Apply the Theory of RCM to Practical Items of Plant*
1200 – 1215	*Break*
1215 – 1300	***Optimizing Condition Based Maintenance Decisions*** *Optimizing Time Based Maintenance • Getting the Most Out of your Equipment Before Repair Time*
1300 – 1315	***Course Conclusion***
1315 – 1415	***COMPETENCY EXAM***
1415 – 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

Practical Sessions

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

Course Coordinator

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