



COURSE OVERVIEW RE0135 **Mastering Materials Management**

Course Title

Mastering Materials Management

Course Date/Venue

January 24-28, 2027/TBA Meeting Room, Royal Tulip Hotel, Muscat, Oman

Course Reference

RE0135

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



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 Mastering Materials Management. It covers the maintenance planning fundamentals and material management principles; the maintenance workflow and material flow, spare parts in maintenance and reliability-based planning; the maintenance planning tools and software, maintenance scheduling techniques, material requirement planning (MRP), work order planning and material allocation; the capacity and resource planning, maintenance shutdown/turnaround planning and inventory control systems; the spare parts forecasting techniques, warehouse operations and layout design; and the procurement interface and supply chain coordination.



During this interactive course, participants will learn the material preservation and storage practices, KPIs and reporting for inventory management and reliability-based spare parts strategy; the failure and root cause analysis for material issues, maintenance cost control, budgeting, material data integrity and documentation; the vendor relationship and performance evaluation, continuous improvement and lean practices; the integrated maintenance and material management systems; the performance measurement and improvement, handling urgent requirements, temporary replacements and alternative materials; managing material traceability during emergencies; the material audit types, record retention, documentation control, reporting systems and KPI dashboards; and the role of material unit in ISO and asset integrity audits.



Course Objectives/Outcomes & Benefits for the Participants

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

- Apply and gain an in-depth knowledge on mastering materials management
- Discuss maintenance and material management, maintenance planning fundamentals and material management principles
- Recognize maintenance workflow and material flow, spare parts in maintenance and reliability-based planning
- Identify maintenance planning tools and software and apply maintenance scheduling techniques, material requirement planning (MRP), work order planning and material allocation
- Carryout capacity and resource planning, maintenance shutdown/turnaround planning and inventory control systems
- Employ spare parts forecasting techniques, warehouse operations and layout design including procurement interface and supply chain coordination
- Apply material preservation and storage practices, KPIs and reporting for inventory management as well as reliability-based spare parts strategy
- Identify failure and root cause analysis for material issues and apply maintenance cost control, budgeting, material data integrity and documentation
- Carryout vendor relationship and performance evaluation, continuous improvement and lean practices and integrated maintenance and material management systems
- Implement performance measurement and improvement, handling urgent requirements, temporary replacements and alternative materials and managing material traceability during emergencies
- Recognize the material audit types, record retention and documentation control, reporting systems and KPI dashboards and the role of material unit in ISO and asset integrity audits

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 mastering materials management for maintenance planners and schedulers, maintenance engineers and supervisors, reliability and asset management professionals, operations and plant engineers, shutdown and turnaround planners warehouse, inventory and material controllers, procurement and supply chain specialists, cost analysts and budget controllers and other technical staff.

Course Certificate(s)

Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours.

Certificate Accreditations

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

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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.

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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 Fee

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.



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. George Poulos, MBA, MSc, BSc, CEng, is a **Senior Mechanical & Maintenance Engineer** with over **30 years** of extensive experience within the **Oil & Gas, Petrochemical, Refinery, Construction, Aircraft & Shipbuilding** Industry. His wide experience cover in the areas of **Materials Management, Reliability Engineering, Maintenance & Reliability Best Practices, Reliability, Availability & Maintainability (RAM), Root Cause Analysis, Maintenance Process, Reliability-Centered Maintenance (RCM), Reliability Engineering Analysis (RE), Root Cause Analysis (RCA), Asset Integrity Management (AIM), Reactive & Proactive Maintenance, Turnaround & Outages, Maintenance & Reliability Management, Mechanical Maintenance Planning, Scheduling & Work Control, Advanced Techniques in Maintenance Management, Predictive & Preventive Maintenance, Maintenance & Operation Cost Reduction Techniques, Machinery Failure Analysis, Rotating Equipment Reliability Optimization & Continuous Improvement, Material Cataloguing, Mechanical & Rotating Equipment Troubleshooting & Maintenance, Aluminium Oxides, Aluminium Smelting Process, Basic Steel Making Process, Hot Rolling Process, Hot Strip Mill, Mill Operations, Roll Mill, Steel Making Process, Steel Manufacturing, Electric Arc Furnace (EAF), Steel Forging, Steel Manufacturing & Process Troubleshooting, Slit Rolling, Carbon Steel Pipe Wall Thickness & Grade Selection, Ferro-Alloys, Steel Metallurgy, Steel Structure Welding, Steelmaking Slag, Steel Making Application, Heat Treatment & Prevention Techniques, Corrosion Fabrication & Inspection and Post Weld Heat Treatment**. Further, he is also well-versed in **Welding Inspection, Welding & Machine Techniques, TIG & Arc Welding, Shielded Metal Arc Welding, Gas Tungsten & Gas Metal Arc Welding, Welding Procedure Specifications & Qualifications, Aluminium Welding, Hot Work-Safety, SMAW, GTAW, Welding Techniques, Pipeline Welding Practices, Welding Engineering, Welding Fatigue & Fracture Mechanics, Welding Inspection Technology, Welding Safety, Welding Defects Analysis, Welding Technology, Welding Problems, Welding & Non Destructive Testing and Metallurgy Techniques**.

During his career life, Mr. Poulos has gained his practical and field experience through his various significant positions and dedication as the **Chief Executive, Head of Technical Studies, Manager, Senior Consultant, Lead Welding Engineer, Reliability & Maintenance Engineer, Senior Welding Engineer, Design Engineer, Mechanical Engineer, Sales Engineer, Author, Welding Instructor, Visiting Lecturer and Technical Proposal Research Evaluator** from various international companies such as Greek Welding Institute, Hellenic Quality Forum and International Construction Companies such as Shipbuilding, Aircraft Industry and Oil and Gas Industry.

Mr. Poulos is a **Registered Chartered Engineer** and has a **Master's** degree in **Naval Architecture**, a **Bachelor's** degree in **Welding Engineering** and a Master of Business Administration (**MBA**) from the **Sunderland University, Aston University and Open University, UK**, respectively. Further, he is a **Certified Trainer/Instructor**, an active Member of Chartered Quality Institute (**CQI**), The British Welding Institute (**TWI**), The Royal Institution of Naval Architects (**RINA**) and American Welding Society (**AWS**), a Registered **EWFIW** (European Welding Federation-International Welding Institute W/E) and an **IRCA** Accredited External Quality Systems Auditor through BVQI. He is an **Author** of Technical Book dealing with Protection/Health/Safety in the Welding/Cutting domain and delivered various trainings, seminars, conferences, workshops and courses globally.



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.

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 workshop for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1: Sunday, 24th of January 2027

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	PRE-TEST
0830 – 0930	Introduction to Maintenance & Material Management Maintenance Objectives and Types (Corrective, Preventive, Predictive) • Role of Material Management in Maintenance Efficiency • Maintenance-Stores-Procurement Interface • KPIs for Maintenance and Materials Coordination
0930 – 0945	Break
0945 – 1030	Maintenance Planning Fundamentals Planning Hierarchy (Strategic, Tactical, Operational) • Elements of a Maintenance Plan • Work Request, Planning, and Scheduling Flow • Planner's Responsibilities and Daily Workflow
1030 – 1130	Material Management Principles Definition and Objectives of Material Management • Material Identification, Classification and Coding Systems • Material Cataloguing and Standardization Techniques • Integration of Materials Data with CMMS/ERP
1130 – 1215	Maintenance Workflow & Material Flow Work Order System and Material Requisition Flow • Material Reservation, Issuance, and Return Process • Coordination Between Planner and Storekeeper • Material Traceability and Documentation



1215 – 1230	Break
1230 – 1330	Understanding Spare Parts in Maintenance Types of Spare Parts (Critical, Consumables, Rotables) • Criticality Analysis of Spare Parts • Spare Part Planning Methods (ABC, VED, XYZ) • Lead Time and Procurement Cycle Understanding
1330 – 1420	Basics of Reliability-Based Planning Reliability-Centered Maintenance (RCM) Principles • Asset Hierarchy and Reliability Modeling • Equipment History and Failure Trends • Planning Materials for Reliability Improvement
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 Monday, 25th of January 2027

0730 – 0830	Maintenance Planning Tools & Software Overview of CMMS, SAP PM, Maximo and Oracle EAM • Work Order Generation and Tracking • Linking Spare Parts and BOM in CMMS • Digital Dashboards for Maintenance KPIs
0830 – 0930	Maintenance Scheduling Techniques Short-Term and Long-Term Scheduling • Gantt Charts and Resource Leveling • Integrating Labor, Tools and Material Availability • Weekly and Daily Maintenance Coordination Meetings
0930 – 0945	Break
0945 – 1100	Material Requirement Planning (MRP) Principles of MRP and its Inputs (BOM, Lead Time, Stock) • Exploding Demand and Net Requirements • Aligning MRP with Preventive Maintenance Plans • Case Study on MRP Implementation
1100 – 1215	Work Order Planning & Material Allocation Identifying Material Needs per Job • Work Order Kitting and Staging • Managing Shortages and Substitutions • Coordination with Procurement and Warehouse
1215 – 1230	Break
1230 – 1330	Capacity & Resource Planning Resource Balancing Between Manpower and Material • Planning Spare Parts for Planned Shutdowns • Material Availability for Critical Jobs • Aligning Maintenance and Production Schedules
1330 – 1420	Maintenance Shutdown/Turnaround Planning Planning Phases (Initiation, Preparation, Execution, Closeout) • Material List and Pre-Ordering Process • Temporary Storage and Logistics • Post-Turnaround Evaluation and Lessons Learned
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: Tuesday, 26th of January 2027

0730 – 0830	Inventory Control Systems Objectives and Challenges in Inventory Management • Inventory Types and Classifications • Inventory Accuracy and Stock Reconciliation • Controlling Obsolete and Surplus Materials
0830 – 0930	Spare Parts Forecasting Techniques Historical Consumption Analysis • Statistical Forecasting Methods (Moving Average, Exponential Smoothing) • Failure Rate-Based Forecasting • Integration with Predictive Maintenance Data
0930 – 0945	Break
0945 – 1100	Warehouse Operations & Layout Design Zoning and Layout for Maintenance Spares • FIFO/LIFO Management and Material Handling • Safety Stock and Reorder Point Calculations • Visual Management and 5S Implementation
1100 – 1215	Procurement Interface & Supply Chain Coordination Requisition-to-Purchase Process Overview • Vendor Selection and Qualification • Coordination Between Planner, Buyer and Storekeeper • Expediting Material Delivery and Follow-Up Techniques
1215 – 1230	Break
1230 – 1330	Material Preservation & Storage Practices Storage Requirements for Mechanical, Electrical, and Instrumentation Spares • Preservation Techniques for Long-Term Storage • Humidity, Temperature, and Contamination Control • Inspection and Periodic Maintenance of Stored Items
1330 – 1420	KPIs & Reporting for Inventory Management Inventory Turnover Ratio and Service Level • Stockout and Overstock Analysis • Cost of Inventory and Optimization Metrics • KPI Dashboard for Material Unit Supervisors
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 Three

Day 4: Wednesday, 27th of January 2027

0730 – 0830	Reliability-Based Spare Parts Strategy MTBF and MTTR Influence on Spare Stock • Risk-Based Inventory Approach • Critical Equipment Material Planning • Using Reliability Data for Procurement Forecasting
0830 – 0930	Failure & Root Cause Analysis for Material Issues Common Causes of Material Unavailability • RCA Tools (Fishbone, 5-Why, Pareto) • Case Studies on Spare Parts-Related Failures • Action Planning and Corrective Measures
0930 – 0945	Break
0945 – 1100	Maintenance Cost Control & Budgeting Cost Breakdown Structure for Maintenance • Budgeting Spare Parts and Consumables • Tracking Material Cost per Work Order • Variance Analysis and Cost Optimization
1100 – 1215	Material Data Integrity & Documentation Master Data Governance and Coding Discipline • Duplicate and Obsolete Materials Elimination • Linking Asset Hierarchy to Material Hierarchy • Audit and Traceability of Materials



1215 – 1230	Break
1230 – 1330	Vendor Relationship & Performance Evaluation Supplier Performance Monitoring and Rating • Framework Agreements for Critical Spares • Vendor-Managed Inventory (VMI) Concepts • Local vs. Global Sourcing Decisions
1330 – 1420	Continuous Improvement & Lean Practices Lean Maintenance Principles • 5S and Kanban in Spare Parts Management • Reducing Waste in Planning and Material Handling • Benchmarking and Best Practices Sharing
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 Four

Day 5: Thursday, 28th of January 2027

0730 – 0830	Integrated Maintenance & Material Management Systems Linking Planning, Procurement and Warehousing Systems • CMMS Integration with ERP and Financial Systems • Data Analytics and Dashboards for Decision-Making • Case Study: Integrated Planning Implementation
0830 – 0930	Performance Measurement & Improvement KPIs for Planners and Material Supervisors • Tracking Backlog, Service Level, and Turnaround Time • Setting Targets and Continuous Improvement Cycles • Team Performance Reviews
0930 – 0945	Break
0945 – 1100	Case Study Workshop: Planning & Material Coordination Developing a Work Plan with Materials Requirement • Identifying Bottlenecks and Improvement Actions • Role-Based Group Exercise (Planner, Storekeeper, Supervisor) • Presentation and Feedback Session
1100 – 1215	Emergency & Breakdown Material Planning Handling Urgent Requirements • Fast-Tracking Procurement and Logistic Support • Temporary Replacements and Alternative Materials • Managing Material Traceability During Emergencies
1215 – 1230	Break
1230 – 1345	Audit, Compliance & Documentation Material Audit Types (Internal, External, Compliance) • Record Retention and Documentation Control • Reporting Systems and KPI Dashboards • Role of Material Unit in ISO and Asset Integrity Audits
1345 – 1400	Course Conclusion Using this Course Overview, the Instructor(s) will Brief Participants about Topics that were Covered During the Course
1400 – 1415	POST-TEST
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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