COURSE OVERVIEW RE0045
Material Cataloguing, Specification and Contract

Course Title
Material Cataloguing, Specification and Contract



Course Date/Venue
November 02-06, 2025/Zafran Meeting Room,
The Tower Plaza Hotel, Dubai, UAE

Course Reference
RE0045

Course Duration/Credits
Five 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.

Proper materials management techniques are critical to the success of any organization as they are key components in determining the success of a company. These techniques invoke fiscal responsibility in the management of funds, thereby ensuring the company receives full value and benefit for the dollars they spend. The techniques also provide the overall direction to purchasing, production, inventory, control and traffic.

This course is designed to provide participants with an up-to-date knowledge and skills on material cataloguing, specifications, handling and storage. It covers the material basics that includes the detailed engineering specifications, brand name specifications and commercial standards; inventory basics for stock activity graphs, economic order quantity (EOQ), dual re-order points and inventory automation examples; inventory control; spare parts lists and spare optimization; and the equipment spares.

At the completion of the course, participants will be able to apply spares demand planning for equipment reliability and supply chain management; employ storeroom procedures, material cataloguing and bar coding; carryout proper techniques from bar coding to smart labelling (RFID), label certification, encoding, printing and validating smart labels; recognize RFID architecture, RFID tags and computerized inventory management systems; explain engineering materials; and apply material specifications, preservation, packaging and storage for bearings, belts, couplings, gaskets, seals, roller chains and sprockets, valves, pipelines, pipings, fittings, flanges, bolts, nuts and blinds.

Course Objectives

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

- Apply and gain systematic techniques on material cataloguing specifications, handling and storage
- Review, analyse and classify the stock (inventory) line items for its adequacy and completeness of specification, catalogue group, validity, compliance and its linkage of the user's requirement
- Gather and assemble data of non-stock materials (direct purchase materials) from various user divisions/departments
- Classify and assign appropriate product group and to integrate with master product catalogue
- Develop unique product/catalogue identification code/part identifications for all products and services in line with international accepted cataloguing system and procedure to ensure technical and commercial integrity of the product and equipment
- Use Configuration Management Systems
- Appraise standard technical specification, acceptable quality standards and in compliance with global health, safety, environment and quality management systems
- Assign storage and handle procedure based on the manufacturer's guidelines
- Discuss material basics covering the detailed engineering specifications, brand name specifications, commercial standards, etc.
- Interpret inventory basics that includes stock activity graphs, economic order quantity (EOQ), dual re-order points, inventory automation examples, etc.
- Implement inventory control comprising of perpetual inventory, variations on the perpetual, inventory method, cycle counts, annual inventory and controlling the value in the storeroom
- Describe spare parts lists and spare optimization
- Identify the equipment spares and apply spares demand planning for equipment reliability and supply chain management
- Employ storeroom procedures, material cataloguing and bar coding
- Carryout proper techniques from bar coding to smart labelling (RFID), label certification, encoding, printing and validating smart labels
- Recognize RFID architecture, RFID tags and computerized inventory management systems

- Explain engineering materials including iron and steel, alloy steels, cast iron, copper and its alloys, aluminum and its alloys, other non-ferrous metals and alloys, plastic materials and rubbers, ceramics, glasses, composite materials and fibre-reinforced composite materials
- Apply material specifications, preservation, packaging and storage for bearings, belts, couplings, gaskets, seals, roller chains and sprockets, valves, pipelines, pipings, fittings, flanges, bolts, nuts and blinds
- Discuss the concept of configuration management and its importance to manage and control configuration in AS&D
- Define the applicable terms and recognize the objectives of configuration management and the benefits for an enterprise gained through application of CM
- Identify the CM and documents control in 9100:2009, the configuration continuum, functions, engineering change and tools

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 material cataloguing, specifications, handling and storage for maintenance, materials and project staff including project managers, maintenance managers, material managers, material engineers, maintenance engineers, planning engineers, MAXIMO engineers, CMMS engineers, planners, project engineers, plant engineers, material officers, senior buyers, purchasing managers, storeroom managers, store keepers, inventory control staff, CMMS professionals, maintenance planners, maintenance supervisors, IT professionals, operations managers, and manufacturing managers.

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$ 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 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:

- 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. Andrew Ladwig is a **Senior Mechanical & Maintenance Engineer** with over **25 years** of extensive experience within the **Oil & Gas**, **Refinery**, **Petrochemical & Power** industries. His expertise widely covers in the areas of **Maintenance Optimization & Best Practices**, **Process Plant Shutdown & Turnaround**, **Maintenance Auditing & Benchmarking**, **Reliability** Management, **Reliability Centered Maintenance Principles & Application**, **Efficient Shutdowns**, **Machinery Lubrication**, **Maintenance Planning & Scheduling**, **Coupling & Shaft Alignment** Techniques, **Maintenance Auditing & Benchmarking**, **Reliability** Management, **Reliability Centered Maintenance Principles & Application**, **Efficient Shutdowns**, **Machinery Lubrication**, **Maintenance Planning & Scheduling**, **Coupling & Shaft Alignment** Techniques, 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, **Pressure Safety Relief Valve** Repair & Recalibration, **PSV/PRV** Troubleshooting, **PRV** Testing & Repair, **Valve** Testing & Inspection, **Valve** Sealing, **Valve** Calibration, **Control Valves & Actuators**, **Boiler** Inspection & Maintenance, **Boiler** Systems, **Boiler** instrumentation & Controls, **Boiler** Start-up & Shutdown, **Boiler** Operation & Steam System Management, **Boiler** Water Chemistry & Treatment, **Boiler** Efficiency & Waste Heat Recovery, **Boiler** Inspection & Testing, **Boiler** Maintenance, **Boiler** Troubleshooting & Safety, **Boiler** Emissions & Pollution Control, **Combustion** Analysis & Tuning Procedures, **Water Treatment** Technology, Heat Recovery Steam Generating (**HRSG**), **Impulse Tube** Installation & Inspection, **Parker Compression Fittings**, **Pipes & Fittings**, **PSV Inspection**, **Root Cause Failure Analysis**, **Tank** Design & Engineering, **Tank Shell**, **Tanks & Tank Farms**, **Vacuum Tanks**, **Gas Turbine** Operating & Maintenance, **Reciprocating & Centrifugal Compressors**, **Screw Compressor**, **Compressor** Control & Protection, **Gas & Steam Turbines**, **Turbine** Operations, **Gas Turbine** Technology, **Valves**, **Process Control Valves**, **Bearings & Lubrication** and Advanced **Machinery Dynamics**.

During his career life, Mr. Ladwig has gained his practical experience through his various significant positions and dedication as the **Mechanical Engineer**, **Project Engineer**, **Reliability & Maintenance Engineer**, **Maintenance Support Engineer**, **Process Engineer**, **HSE Supervisor**, **Warehouse Manager**, **Quality Manager**, **Business Analyst**, **Senior Process Controller**, **Process Controller**, **Safety Officer**, **Mechanical Technician**, **Senior Lecturer** and **Senior Consultant/Trainer** for various companies such as the Sasol Ltd., Sasol Wax, Sasol Synfuels, just to name a few.

Mr. Ladwig has a **Bachelor's** degree in **Chemical Engineering** and a **Diploma** in **Mechanical Engineering**. Further, he is a **Certified Instructor/Trainer**, a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management** (**ILM**) and has delivered various trainings, workshops, seminars, courses 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: ***Sunday, 02nd of November 2025***

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0930	***Material Basics*** *Detailed Engineering Specifications ● Brand Name Specifications ● Commercial Standards ● Purchase Materials in the Proper Quantity ● Receive Materials at the Optimum Time ● MRO Control Goals ● Supervising Storeroom Benefits and Justifications*
0930 – 0945	*Break*
0945 – 1100	***Inventory Basics*** *Stock Activity Graphs ● Economic Order Quantity (EOQ) ● Dual Re-order Points ● Inventory Automation Examples ● Open or Closed Storeroom ● Physical Storage ● Return to Stores*
1100 – 1230	***Inventory Control*** *Perpetual Inventory ● Variations on the Perpetual ● Inventory Method ● Cycle Counts ● Annual Inventory ● Controlling the Value in the Storeroom*
1230 – 1245	*Break*
1245 – 1420	***Spare Parts Lists*** *Plant Heirarchy ● Preparation and Maintenance of Part Lists ● Parts List Standard*
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, 03rd of November 2025***

0730 – 0930	***Spare Optimization*** *Stock Level Establishment ● Min-Max Stocks ● Lead Time Delivery*
0930 – 0945	*Break*
0945 – 1100	***Equipment Spares Identification*** *Equipment Types ● Spares Identification ● Stock Level ● Equipment Criticality*
1100 – 1230	***Spares Demand Planning*** *Equipment Reliability ● Spares Demand Planning ● Supply Chain Management*
1230 – 1245	*Break*
1245 – 1420	***Storeroom Procedures*** *Primary ID ● Store Stock Catalog ● Part Descriptions ● Adequate Information on every Potential Item ● Store Stock Numbering ● Everything Identified All*
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, 04th of November 2025

0730 – 0930	***Material Cataloguing*** *Describing the Part • Other Uses of the Description • A Case for Descriptive Item Numbers • Heirarchal Systems • Stock Index for ID • Inventory Classification*
0930 – 0945	*Break*
0945 – 1100	***Material Cataloguing (cont'd)*** *Location Codes • Stock Number of Bin Location • Bill of Materials (BOM) • Consignment Inventory • Rebuilt Parts • Used Parts*
1100 – 1230	***Bar Coding*** *Bar Code Readers • Bar Code Systems • Bar Code Printing • Moving to Bar Codes • Bar Code Support Suppliers*
1230 – 1245	*Break*
1245 – 1420	***From Bar Codes to Smart Labels (RFID)*** *Label Certification • Encoding, Printing and Validating Smart Labels • Readers and Printers • Building Blocks of an RFID Reader • Logical Components of an RFID Reader • Building Blocks of RFID Printers • Types of Readers • Trends and Possibilities*
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, 05th of November 2025

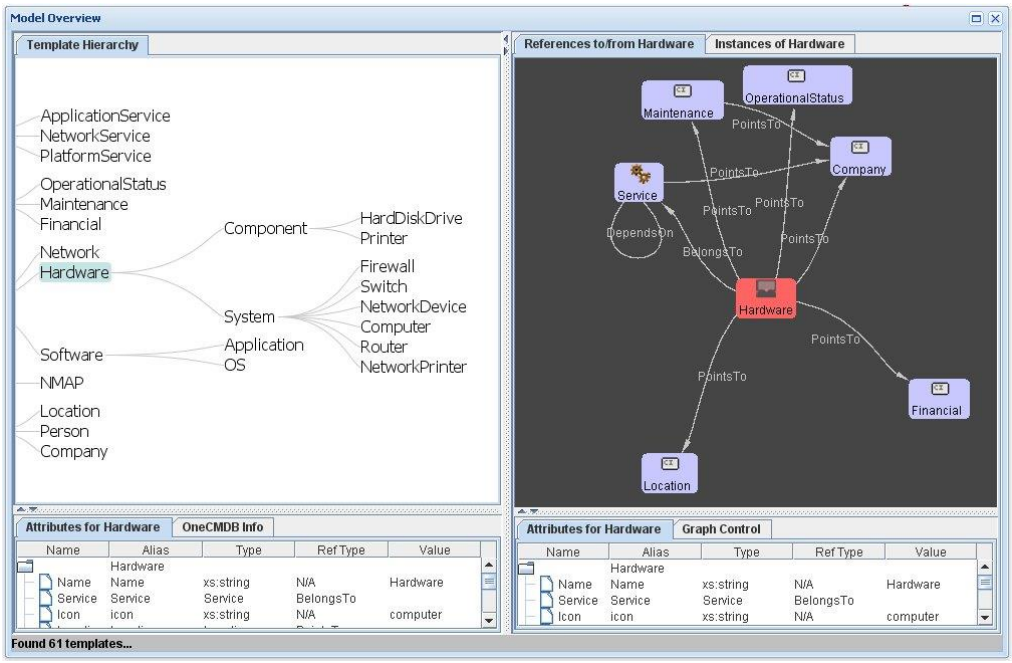
0730 – 0930	***RFID Architecture*** *Key Building Blocks and Functionalities • Farady's Magnetic Field Induction Experiment • What Constitutes an RFID System? • RFID System Components • Systemic Quality Considerations • Architecture and System Guidelines • System Management*
0930 – 0945	*Break*
0945 – 1100	***RFID Tags*** *Tag Types (Active and Passive Tags) • Data Carrying Options • Tag Construction • Tag Frequencies • Passive Tag Communication • dEPC Tag Classes • Tag Singulation Process • Tag Selection and Placement*
1100 – 1230	***Computerized Inventory Management Systems*** *Building Blocks • Canned Report Generator • Ad-Hoc Report Generator • Data Mining Tools • Report Mining Tools*
1230 – 1245	*Break*
1245 – 1420	***Engineering Materials Overview*** *Iron and Steel • Alloy Steels • Cast Iron • Copper and its Alloys • Aluminum and its Alloys • Other Non-ferrous Metals and Alloys • Plastic Materials and Rubbers • Ceramics • Glasses • Composite Materials • Fibre-reinforced Composite Materials*
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, 06th of November 2025***

0730 – 0930	***Material Specifications, Preservation, Packaging & Storage*** *Bearings ● Belts ● Couplings ● Gaskets*
0930 – 0945	*Break*
0945 – 1100	***Material Specifications, Preservation, Packaging & Storage (cont'd)*** *Seals ● Roller Chains and Sprockets ● Valves ● Pipelines ● Pipings*
1100 – 1230	***Material Specifications, Preservation, Packaging & Storage (cont'd)*** *Fittings ● Flanges ● Bolts ● Nuts ● Blinds*
1230 – 1245	*Break*
1245 – 1345	***Configuration Management*** *What is Configuration? ● Why it is Important to Manage & Control Configuration in AS&D ● Applicable Terms & Definitions ● The Objectives of Configuration Management ● Benefits for an Enterprise Gained Through Application of CM ● CM & Documents Control in 9100:2009 ● The Configuration Continuum ● CM Functions ● CM vs. Engineering Change ● CM Tools*
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*

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 "ITIL CMDB Configuration Management System".



ITIL CMDB Configuration Management System

Course Coordinator

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