

COURSE OVERVIEW RE0011(AL4)
Maintenance Auditing, Benchmarking & Performance Improvement

Course Title

Maintenance Auditing, Benchmarking & Performance Improvement

Course Date/Venue

September 02-06, 2024/ Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

Course Reference

RE0011(AL4)

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.



This course is designed to provide participants with a detailed and up-to-date overview of maintenance auditing, benchmarking and performance improvement. It covers the maintenance operations and maintenance benchmarking study; the results to establish and monitor an effective improvement strategy; auditing and benchmarking as a key element of the maintenance management strategy; the importance of measures including auditing in achieving organizational goals; selecting appropriate measures including auditing that position the maintenance function as a value-added contributor to the company, plant or organizational mission; the auditing program to the business model for better overall organizational performance; and the step-by-step conceptual model upon which to build a successful measures implementation program for any company, plant or organization.



Further, the course will also discuss the basic guidelines and principles for developing and implementing an effective measures program; the “highest and best” use of measures in any context, what constitutes good measures and where to apply measures; the seven key measures of organizational performance and how to



relate them to maintenance; and the primary categories of maintenance performance measures including auditing and selecting appropriate measures from them.

At the end of the course, participants will be able to audit several complex activities within maintenance function; benchmark the internal audit approach and supporting tools and techniques effectively; create a foundation for increasing the effectiveness of the audit strategies and delivering value-added results; apply the data cycle concept to measures collection, presentation and analysis; benchmark the plant against world-class companies and apply the required steps toward world-class maintenance; and implement an improvement program that will put maintenance department within the world-class status.

Course Objectives

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

- Apply proper techniques in maintenance auditing, benchmarking and performance improvement
- Audit the maintenance operations and conduct a maintenance benchmarking study efficiently
- Use the results to establish and monitor an effective improvement strategy
- Establish auditing and benchmarking as a key element of the maintenance management strategy
- Recognize the importance of measures including auditing in achieving organizational goals
- Select appropriate measures including auditing that position the maintenance function as a value-added contributor to the company, plant or organizational mission
- Link the auditing program to the business model for better overall organizational performance
- Link selected measures such as auditing to the “critical business issues” and the “key results areas” that drive organizational performance
- Develop step-by-step conceptual model upon which to build a successful measures implementation program for any company, plant or organization
- Discuss the basic guidelines and principles for developing and implementing an effective measures program
- Identify the “highest and best” use of measures in any context, what constitutes good measures and where to apply measures
- List the seven key measures of organizational performance and describe how to relate them to maintenance
- Explain the primary categories of maintenance performance measures including auditing and select appropriate measures from them
- Audit several complex activities within maintenance function as well as benchmark the internal audit approach and supporting tools and techniques effectively
- Create a foundation for increasing the effectiveness of the audit strategies and delivering value-added results



- Apply the data cycle concept to measures collection, presentation and analysis
- Benchmark the plant against world-class companies and apply the required steps toward world-class maintenance
- Implement an improvement program that will put maintenance department within the world-class status

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, sample video clips of the instructor’s actual lectures & practical sessions during the course conveniently saved in a **Tablet PC**.

Who Should Attend

This course is intended for maintenance managers, superintendents, engineers and supervisors who realize the power of performance measurement to motivate, coordinate, and achieve the overall goals and objectives of their company, plant, or department. Line or staff, maintenance or production, mid-level or executive, every attendee will benefit from this imminently practical ‘workshop’ approach to establishing meaningful measures of maintenance performance.

Course Fee


US\$ 5,000 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


Certificates are accredited by the following international accreditation organizations:-

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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.

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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**. 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.

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. Den Bazley, PE, BSc, is a **Senior Pipeline & Mechanical Maintenance Engineer** with **40 years** of industrial experience in **Oil, Gas, Refinery, Petrochemical, Power** and **Utilities** industries. His wide expertise includes **Pipeline & Piping Design, Process Piping Design & Mechanical Integrity, Piping & Pipeline Maintenance & Repair, Pipeline Operation & Maintenance, Pigging, Integrity Assessment, Layout of Piping Systems & Process Equipment, Pipe Work Design & Fabrication, Mechanical Piping Systems Design & Specification, Piping & Storage Facilities, Fitness for Service** for

Petrochemical Plants, **Pipeline Equipment Operation, Pipeline Rules of Thumb, Welding Technology, Welding & Fabrication, Welding & Brazing, Mechanical Integrity & Reliability**, Advanced Integrity Management, **Root Cause Analysis** on Technical Failure Investigation Pertaining to Asset Integrity/Engineering, **Pressure Vessel Fabrication & Testing, Vacuum Systems, Mechanical Rotating Equipment & Turbomachinery, Centrifugal Pump & Compressors, Pump Maintenance, Propylene Compressor & Turbine, Safety Relief Valve (PRV-PSV) Inspection & Testing, Process Control Valves, Valve Troubleshooting & Repair Procedure, Advanced Valve Technology, Pressure Vessels & Heat Exchangers Design, Strainers & Steam Traps, Advanced Boiler Operation & Maintenance, Gas & Steam Turbine Operation, Process Design Parameters for Gas Compressor/Turbines, Boilers & Steam System Management, Dry Gas Seal Installation & Commissioning, Tank Installation & Maintenance, Bearing Mounting/Dismounting, Mechanical Seals & Systems, Gear Boxes Selection & Inspection, Machinery Troubleshooting, Machinery Failure Analysis & Troubleshooting, Rotating Machinery Best Practices, Predictive Maintenance, Maintenance Planning Scheduling & Work Control, Maintenance Strategy Development & Cost-Effective Implementation, Alignment & Troubleshooting of Rotating Machinery, Planning Managing Shutdowns & Turnarounds, Reliability Centered Maintenance & Total Productivity Maintenance, Analytical Prevention of Mechanical Failure, Maintenance Planning and Scheduling & Cost Estimation.**

During his career life, Mr. Bazley has gained his practical and field experience through his various significant positions and dedication as the **General Manager, Branch Manager, Refinery Chairman, Engineering Manager, Maintenance Engineer, Construction Engineer, Project Engineer, Mechanical Engineer, Piping Engineer, Pipeline Engineer, Associate Engineer, Oil Process Engineer, Mechanical Services Superintendent, Quality Coordinator, Planning Coordinator, Consultant/Instructor, Lecturer/Trainer** and **Public Relations Officer** for numerous international companies like **ESSO, FFS Refinery, Dorbyl Heavy Engineering (VECOR), Vandenberg Foods (Unilever), Engen Petroleum, Royle Trust** and **Pepsi-Cola**.

Mr. Bazley is a **Registered Professional Engineer** and has a **Bachelor's degree in Mechanical Engineering**. Further, he is a **Certified Engineer** (Government Certificate of Competency GCC Mechanical Pretoria SA), **Certified Instructor/Trainer**, a **Certified Internal Verifier/Trainer/ Assessor**, an active member of the **Institute of Mechanical Engineers (IMechE)** and has delivered numerous trainings, courses, seminars and workshops 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 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: Monday 02nd of September 2024

0800 – 0830	<i>Registration & Coffee</i>
0830 – 0845	<i>Welcome & Introduction</i>
0845 – 0900	PRE-TEST
0900 – 0930	<i>Introduction & Foundation Concepts</i>
0930 – 0945	<i>Break</i>
0945 – 1100	<i>Maintenance Management Environment & the Need for Improvement</i>
1100 – 1200	<i>Various Approaches to Maintenance Improvement</i>
1200 – 1300	<i>Lunch</i>
1300 – 1330	<i>Maintenance Auditing & Benchmarking</i>
1330 – 1345	<i>Break</i>
1345 – 1450	<i>Using Auditing & Benchmarking to Drive Improvement</i>
1450 – 1500	Recap
1500	<i>Lunch & End of Day One</i>

Day 2: Tuesday 03rd of September 2024

0800 – 0900	<i>Implementing Sustainable Approaches to Improvement</i>
0900 – 0930	<i>Maintenance Auditing</i>
0930 – 0945	<i>Break</i>
0945 – 1100	<i>The Maintenance Auditing Process</i>
1100 – 1200	<i>Maintenance Auditing Methodology</i>
1200 – 1300	<i>Lunch</i>
1300 – 1330	<i>Conducting a Maintenance Audit</i>
1330 – 1345	<i>Break</i>
1345 – 1450	<i>Interpreting Audit Results</i>
1450 – 1500	Recap
1500	<i>Lunch & End of Day Two</i>



Day 3: Wednesday 04th of September 2024

0800 – 0930	Using Auditing to Drive Improvement
0930 – 0945	Break
0945 – 1100	Maintenance Auditing & Benchmarking
1100 – 1200	Using the Maintenance Audit for Internal Benchmarking
1200 – 1300	Lunch
1300 – 1330	Designing a Customized Maintenance Audit Process
1330 – 1345	Break
1345 – 1450	The Maintenance Benchmarking Process
1450 – 1500	Recap
1500	Lunch & End of Day Three

Day 4: Thursday 05th of September 2024

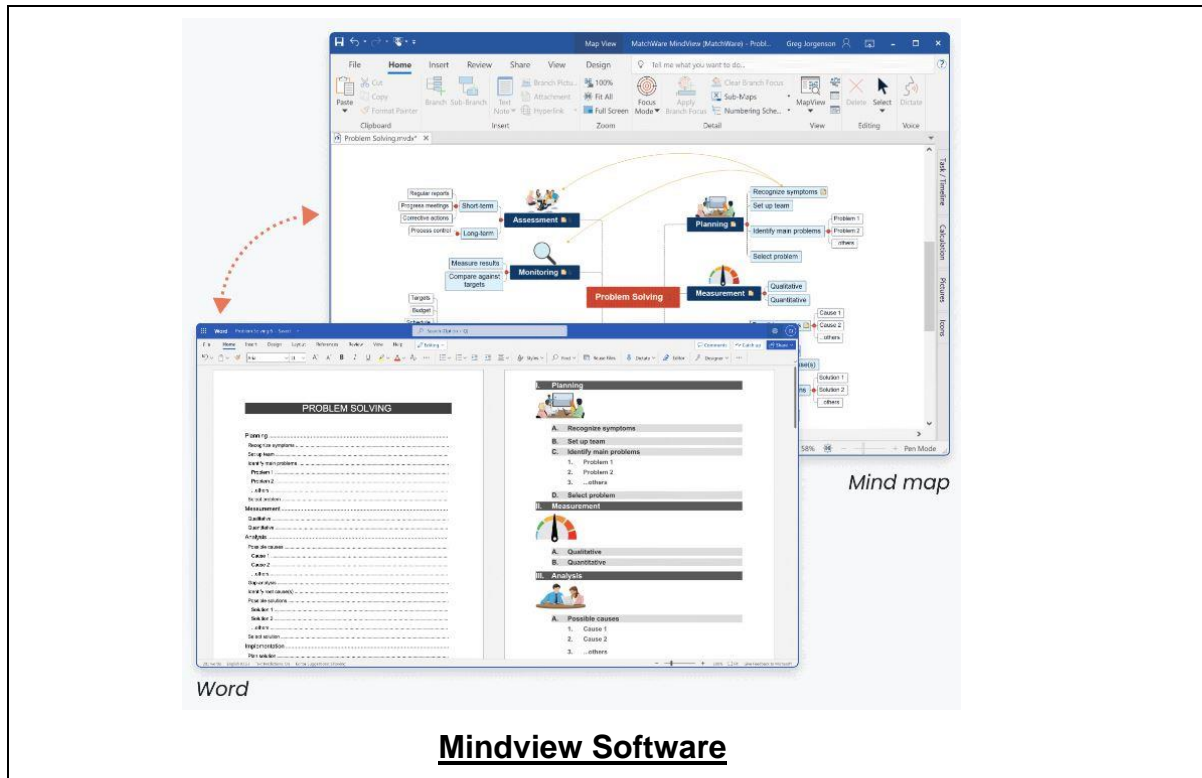
0730 - 0830	Maintenance Benchmarking Methodology
0830 – 0930	Designing & Preparing for a Benchmarking Study
0930 – 0945	Break
0945 – 1100	Maintenance Benchmarking and Performance Management
1100 – 1230	Conducting a Maintenance Benchmarking Study
1230 – 1245	Break
1345 – 1450	Integrating Benchmarking Resulting into Improvement & Objective Setting Processes
1450 – 1500	Recap
1500	Lunch & End of Day Four

Day 5: Friday 06th of September 2024

0730 – 0830	Reporting Results of Benchmarking & Auditing Studies
0830 – 0930	Developing Key Performance for Maintenance
0930 – 0945	Break
0945 – 1100	The Maintenance Balanced Scorecard
1100 – 1230	Integrating Maintenance Auditing & Benchmarking into the Performance Measurement System
1230 – 1245	Break
1245 – 1345	Using Auditing & Benchmarking to Establish Improvement Objectives & Strategies Monitoring Performance Improvement
1345 – 1400	Course Conclusion
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 “MS Project” and “Mindview Software”.



Course Coordinator

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