COURSE OVERVIEW FE0012
Factory Acceptance Tests

Course Title
Factory Acceptance Tests

Course Date/Venue
Session 1: July 06-10, 2025/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE
Session 2: December 08-12, 2025/Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

Course Reference
FE0012

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.

The Factory Acceptance Test (FAT) - Fundamental course provides participants with a foundational understanding of the purpose, principles and essential procedures involved in conducting a Factory Acceptance Test for industrial equipment and systems. It covers the purpose and importance of FAT in the project lifecycle; differentiating FAT from other types of acceptance tests; the benefits of conducting a FAT; and ensuring equipment meets specifications and requirements.

During this interactive course, participants will learn the roles and responsibilities of each FAT team member; the FAT procedure, Pre-FAT preparations and execution of FAT; the Post-FAT process and analyzing FAT results; and the required documentation before, during and after FAT.

Course Objectives

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

- Apply and gain a fundamental knowledge on factory acceptance test (FAT)
- Explain what a factory acceptance test (FAT) is
- Explain the benefits of the FAT and the roles and responsibilities of the FAT team
- Explain the FAT process, Post-FAT process and FAT associated documentation
- Discuss the purpose and importance of FAT in the project lifecycle as well as differentiate FAT from other types of acceptance tests
- Recognize the benefits of conducting a FAT and ensure equipment meets specifications and requirements
- Identify the composition of the FAT team and explain the FAT procedure
- Review the required documentation before, during and after FAT

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 fundamental overview of Factory Acceptance Test (FAT) for operations managers, safety managers, production supervisors, process engineers, maintenance engineers, commissioning and planning engineers, Quality Control personnel, technicians and operators.

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

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.

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:

Dr. Maged Elhefnawey, PhD, MSc, BSc, ASNT-NDT, is a **Senior Mechanical & Maintenance Engineer** with **extensive years** of experience in Factory Acceptance Tests **(FAT)**, **Insulation** Inspection & Quality Control, **Insulation** Standards & Regulations, **Thermal Insulation**, **Piping System Insulation**, **Pipeline & Piping Insulation**, **Insulation** & Corrosion Protection, **Insulation** Maintenance & Repair, **Heat Exchanger & Boiler Insulation**, **Insulation Installation** Techniques, **Insulation** Thickness Calculation, **Insulation** Retrofitting, **Insulation** Materials & Selection, **Insulation** Testing & Quality Assurance, **Tanks & Vessels Insulation**, **Heat Exchanger & Tank Farms**, **Pressure Relief Valve**, **Control Valves & Actuators**, **Compressor & Pumps** Troubleshooting & Repair, **Piping & Pipeline** Maintenance, **Boiler** Operation & Maintenance, **Flange Joint & Flange** Management, **Bolt Torquing**, **Vibration** Analysis, Gas Transmission & Piping Distribution System (**ASME B31.8**), **Material Selection** Codes & Standards, **Diesel Engine** Operation & Maintenance, **Pipe Stress** Analysis, **Rotating Equipment** Inspection & Troubleshooting, **Gas & Steam Turbine**, **Dry Gas Seal**, **Motors**, **Turbo-expanders**, **Gears**, **Blower & Fan**, Vapor Recovery Unit System, **Thermal Power Plant**, **Pressure Vessel** Design & Fabrication, **Hydraulic System** Operation & Maintenance, **Bearings & Lubrication**, **Roll Pass** Design & Mill Operation, **Furnace** Operation & Troubleshooting, **Fired Heater**, **Mechanical Equipment** Installation, **Piping & Pipe** Support Systems, **Welding** Inspection, **Coating** Inspection, **ASNT-NDT** Techniques, **Painting** & **Hydrotesting**, **Piping** Fabrication & Assembly and **Water Pipes** Inspection & Repair. He is also well-versed in **Maintenance Auditing & Benchmarking**, **Maintenance & Reliability** Management, **Equipment Failure Analysis**, **Rotating Equipment & Machinery**, **Material Cataloguing** & Storage, **Alignment & Balancing** Techniques, **Condition** Monitoring, **Machinery Failure** Analysis, Reliability Centered Maintenance (**RCM**), Root Cause Analysis (**RCA**), **Maintenance Planning & Scheduling**, **Physical Asset** Management, **Maintenance Cost Control**, **Prevention & Predictive** Maintenance, **Lubricant & Oil** Analysis and **Refinery Equipment** Maintenance.

During his career life, Dr. Maged has gained his expertise and thorough practical experience through several positions and dedication as the Acting **Department Head**, **Thermal Insulation Engineer**, **Section Head Projects Engineer**, **Mechanical Engineer**, **Maintenance Engineer**, **Mechanical Supervisor**, **Lecturer**, **Instructor/Trainer**, **Assistant Professor** and **Senior Thermal Insulation Technician** for various international companies and institutions such as the Gulf of Suez Petroleum Co. (GUPCO), British Petroleum (BP), BETROBEL, KNPC, SAIPEM Engineering, Natural Gas Pipeline, TRACTEBEL Engineering, Suez and TransGas Company to name a few. He also worked as **Mechanical/NDT Supervisor** wherein he was responsible for executing the scheduled inspections for welding, coating, pipeline, painting, hydrotest of pipeline & piping and fabrication and assembly.

Dr. Maged has a **PhD** and **Master's** degree in a **Certified API 580** Risk Based Inspection, a **Certified API 570** Piping Inspector, a **Certified API 510** Pressure Vessel Inspector, a **Certified API 653** Aboveground Storage Tank Inspector, **Mechanical Production Engineering** and a **Bachelor's** degree in **Mechanical Power Engineering**. Further, he is a **Certified ASNT Level II** (RT-PT-MT & UT), **Certified Instructor/Trainer**, a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management** (**ILM**) and further published numerous academic papers and delivered various trainings, courses, workshops, seminars and conferences worldwide.

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 - 0900	**Introduction to Factory Acceptance Test (FAT)**
0900 - 0930	**Definition & Purpose of FAT**
0930 - 0945	Break
0945 - 1030	**Importance of FAT in the Project Lifecycle**
1030 - 1130	**Differentiating FAT from Other Types of Acceptance Tests**
1130 - 1230	**Benefits of Conducting a FAT**
1230 - 1245	Break
1245 - 1330	**Ensuring Equipment Meets Specifications & Requirements**
1330 – 1420	**Identifying & Mitigating Issues Before Shipping**
1420 – 1430	**Recap**
1430	Lunch & End of Day One

Day 2

0730 – 0830	**Improving Project Quality & Reliability**
0830 - 0930	**Cost & Time Savings Through Early Detection of Defects**
0930 – 0945	Break
0945 – 1100	**Roles & Responsibilities of the FAT Team**
1100 - 1130	**Composition of the FAT Team**
1230 – 1245	Break
1245 – 1330	**Responsibilities of Each Team Member (e.g., Client, Manufacturer, Third-Party Inspectors)**
1330 - 1420	**Coordination & Communication Among Team Members**
1420 - 1430	**Recap**
1430	Lunch & End of Day Two

Day 3

0730 – 0830	**The FAT Process**
00830 - 0930	**Detailed Overview of the FAT Procedure**
0930 – 0945	Break
0945 – 1100	**Pre-FAT Preparations (Documentation, Test • Equipment, Personnel Readiness)**
1100 – 1230	**Execution of FAT (Test Sequences, Data Collection, Observation)**
1230 – 1245	Break
1245 – 1330	**Managing Deviations & Non-Conformities During FAT**
1330 - 1420	**Post-FAT Process**
1420 – 1430	**Recap**
1430	Lunch & End of Day Three

Day 4

0730 – 0830	**Analyzing FAT Results**
0830 - 0930	**Addressing Identified Issues & Corrective Actions**
0930 – 0945	Break

0945 – 1030	***Final Acceptance Criteria & Sign-Off Process Break***
1030 - 1130	***FAT Associated Documentation***
1130 – 1230	***Required Documentation Before, During & After FAT***
1230 – 1245	*Break*
1245 – 1330	***Creating & Maintaining FAT Reports***
1330 - 1420	***Document Control & Record-Keeping Practices***
1420 - 1430	***Recap***
1430	*Lunch & End of Day Four*

Day 5

0730 – 0930	***Examples of Typical FAT Documents (Checklists, Test Reports, Certification)***
0930 – 0945	*Break*
0945 - 1030	***Case Studies & Practical Examples***
1030 - 1130	***Review of Real-World FAT Scenarios***
1130 - 1230	***Lessons Learned & Best Practices***
1230 – 1245	*Break*
1245 - 1345	***Group Discussion on Common Challenges & Solutions***
1345 -1400	***Course Conclusion***
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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