COURSE OVERVIEW ME0933
Hydraulic Tools & Fitting Certification

Course Title:
Hydraulic Tools & Fitting Certification

Course Date/Venue
Session 1: August 18-22, 2024/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE
Session 2: November 17-21, 2024/Al Aziziya Hall, The Proud Hotel Al Khobar, Al Khobar, KSA

Course Reference
ME0933

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 hydraulics tools and its types covering breakers, crimpers, alternators, core drills, chipping hammers, saws, pumps, drills, diggers, grinders and wrenches; the basic parts, preparation and applications; hydraulic tools maintenance, hand torque, hydraulically tensioned and hydraulically torque bolted connection techniques; hand torque flanged joints, tension bolted connections and hydraulically torque flanged joints; torque tightening and describe mechanical joint integrity as well as perform disassembly, inspection, assembly and safe use of high pressure hydraulic equipment.

During this interactive course, participants will learn the various reference related to standards for pressurised systems and discuss pipe fitting certifications; the various types of work performed by pipefitters; safety, vises, stands and hand tools safety as well as threading machines, special threading applications, portable power drives and power bevellers.

Course Objectives

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

- Apply and gain a comprehensive knowledge on hydraulic tools and fitting
- Discuss hydraulics tools and its types covering breakers, crimpers, alternators, core drills, chipping hammers, saws, pumps, drills, diggers, grinders and wrenches
- Identify the basic parts, preparation and applications
- Employ hydraulic tools maintenance, hand torque, hydraulically tensioned and hydraulically torque bolted connection techniques
- Dismantle and assemble hand torque flanged joints, tension bolted connections and hydraulically torque flanged joints
- Carryout proper torque tightening and describe mechanical joint integrity as well as perform disassembly, inspection, assembly and safe use of high pressure hydraulic equipment
- Review various reference related to standards for pressurised systems and discuss pipe fitting certifications
- Enumerate the various types of work performed by pipefitters
- Illustrate safety, vises, stands and hand tools safety as well as threading machines, special threading applications, portable power drives and power bevellers

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*

Who Should Attend

This course covers systematic techniques in hydraulic tools and fitting for all technicians.

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:-

(1) 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
ME0933	Hydraulic Tools & Fitting Certification	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: -

- 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.

- 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.

Course Fee

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.
Al Khobar	**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. Manuel Dalas MSc, BSc, is a **Senior Mechanical & Maintenance Engineer** with over **20 years** of industrial experience in **Oil**, **Gas**, **Refinery**, **Petrochemical**, **Power** and **Nuclear** industries. His wide expertise includes **Material Cataloguing**, **Maintenance Planning & Scheduling**, Reliability Centered Maintenance (**RCM**), **Reliability Maintenance**, **Condition Based Maintenance & Condition Monitoring**, **Asset & Risk** Management, **Vibration Condition Monitoring & Diagnostics** of Machines, **Vibration & Predictive** Maintenance, Reliability Improvement & Vibration Analysis for Rotating Machinery, Effective Maintenance **Shutdown & Turnaround** Management, **Engineering Codes & Standards**, **Rotating Equipment** Maintenance, **Mechanical** Troubleshooting, **Static Mechanical Equipment** Maintenance, **Machinery** Failure Analysis, **Machinery Diagnostics & Root Cause Failure** Analysis, **Plant Reliability & Maintenance** Strategies, **Boiler** Operation & Water Treatment, **Pumps** Maintenance & Troubleshooting, **Fans**, **Blowers & Compressors**, **Process Control Valves**, Piping Systems & Process Equipment, **Gas Turbines & Compressors** Troubleshooting, Advanced **Valve** Technology, **Pressure Vessel** Design & Analysis, **Steam & Gas Turbine**, **High Pressure Boiler** Operation, **FRP Pipe** Maintenance & Repair, **Centrifugal & Positive Displacement Pump** Technology Troubleshooting & Maintenance, **Rotating Machinery** Best Practices, **PD Compressor & Gas Engine** Operation & Troubleshooting, **Hydraulic Tools & Fitting**, **Mass & Material Balance**, **Water Distribution & Pump Station**, **Tank Farm & Tank Termina**l Safety & Integrity Management, **Process Piping** Design, Construction & **Mechanical Integrity**, **Stack & Noise** Monitoring, **HVAC & Refrigeration** Systems, BPV Code, Section VIII, Division 2, **Facility Planning & Energy** Management, Hoist - Remote & Basic **Rigging & Slinging**, **Mobile Equipment** Operation & Inspection, **Heat Exchanger**, **Safety Relief Valve**, **PRV & POPRV/PORV**, **Bearing & Lubrication**, **Voith Coupling** Overhaul, **Pump & Valve** Technology, **Lubrication** Inspection, **Process Plant** Optimization, Rehabilitation, Revamping & Debottlenecking, Engineering Problem Solving and **Process Plant** Performance & Efficiency. Currently, he is the **Technical Consultant** of the **Association of Local Authorities of Greater Thessaloniki** where he is in charge of the mechanical engineering services for piping, pressure vessels fabrications and ironwork.

During his career life, Mr. Dalas has gained his practical and field experience through his various significant positions and dedication as the **Technical Manager**, **Project Engineer**, **Safety Engineer**, **Deputy Officer**, **Instructor**, **Construction Manager**, **Construction Engineer**, **Consultant Engineer** and **Mechanical Engineer** for numerous multi-billion companies including the **Biological Recycling Unit** and the **Department of Supplies** of **Greece**, **Alpha Bank Group**, **EMKE S.A**, **ASTE LLC** and **Polytechnic College of Evosmos**.

Mr. Dalas has a **Master** degree in **Energy System** from the **International Hellenic University, School of Science & Technology** and a **Bachelor** degree in **Mechanical Engineering** from the **Mechanical Engineering Technical University of Greece** along with a **Diploma** in **Management & Production Engineering** from the **Technical University of Crete**. Further, he is a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership and Management** (**ILM**), a **Certified Project Manager Professional** (**PMI-PMP**), a **Certified Instructor/Trainer**, a **Certified Energy Auditor** for **Buildings**, **Heating & Climate Systems**, a **Member** of the **Hellenic Valuation Institute** and the **Association of Greek Valuers** and a **Licensed Expert Valuer Consultant** of the **Ministry of Development and Competitiveness**. He has further delivered numerous trainings, courses, seminars, conferences 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

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0915	***Hydraulic Tools*** *What are they? • Types of Hydraulic Tools*
0915 – 0930	*Break*
0930 – 1030	***Types of Hydraulic Tools*** *Breakers • Crimpers • Alternators • Core Drills • Chipping Hammers • Saws • Pumps • Drills • Diggers • Grinders • Wrenches*
1030 – 1230	***Basic Parts, Preparation & Applications***
1230 – 1245	*Break*
1245 – 1420	***Maintenance of Hydraulic Tools***
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

0730 – 0930	***Hand Torque Bolted Connection Techniques***
0930 – 0945	*Break*
0945 – 1030	***Hydraulically Tensioned Bolted Connection Techniques***
1030 – 1230	***Hydraulically Torqued Bolted Connection Techniques (cont'd)***
1230 – 1245	*Break*
1245 – 1420	***Dismantle, Assemble & Hand Torque Flanged Joints*** *Torque Clamp Connectors*
1420 – 1430	***Recap***
1430	*Lunch & End of Day Two*

Day 3

0730 – 0930	***Dismantle, Assemble & Tension Bolted Connections*** *Hydraulic Tensioning • Torque Tightening*
0930 – 0945	*Break*
0945 – 1030	***Dismantle, Assemble & Hydraulically Torque Flanged Joints*** *Clamp Connector Joint*
1030 – 1230	***Mechanical Joint Integrity*** *Flange and Bolt Materials • Components • Lubricants*
1230 – 1245	*Break*
1245 – 1420	***Disassembly, Inspection & Assembly*** *Safe Use of High Pressure Hydraulic Equipment • Tooling Service and Repair • Correct Tool Selection*
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

0730 – 0930	***Disassembly, Inspection, Assembly & Safe Use of High Pressure Hydraulic Equipment*** *Tooling Service and Repair • Correct Tool Selection*
0930 – 0945	*Break*
0945 – 1030	***Reference to Related Standards*** *ASME PCC-1-2010 Guidelines for Pressure Boundary Bolted Flange Joint Assembly • Energy Institute Guidelines for the Management of the Integrity of Bolted Joint*
1030 – 1230	***Reference to Related Standards for Pressurised Systems*** *EN 1515-1: 1999 Flanges and their Joints – Bolting • Design Rules for Gasketed Circular Flange Connections • Gasket Parameters • CEN/TS 1591-4: 2007 Flanges and their Joints • Qualification of Personnel Competency in the Assembly of Bolted Joints Fitted to Equipment Subject to the PED*
1230 – 1245	*Break*
1245 – 1420	***Pipe Fitting Certifications***
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*

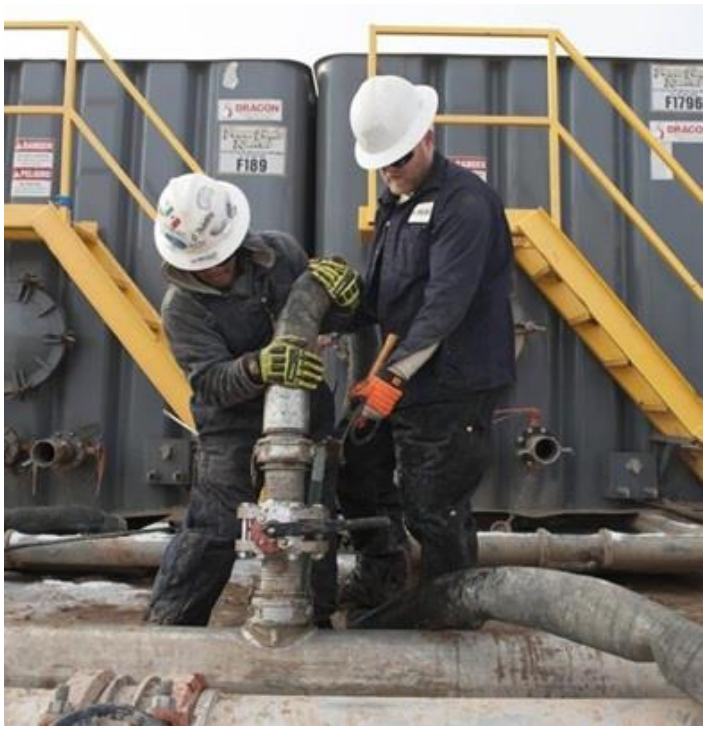
Day 5

0730 – 0930	***Types of Work Performed by Pipefitters*** *Responsibilities and Characteristics of a Good Pipefitter • Importance of Safety in Relation to Pipefitting*
0930 – 0945	*Break*
0945 – 1100	***Introduction, Safety, Vises, Stands & Hand Tool Safety*** *Pipe Wrenches and Levels • Wrenches • Pipe Fabrication Tools • Squares and Center Finders • Clamps • Gauges and Wraparounds Pins • E. Flange Spreader • Pipe Cutting Tools Saws • Tube Cutters • Pipe Cutters • Reamers and Threaders • Extractors and Taps • Benders and Flaring Tools • Benders • Flaring Tools*

1100 – 1230	***Threading Machines & Special Threading Applications***
1230 – 1245	*Break*
1245 – 1300	***Portable Power Drives & Power Bevellers***
1300 – 1315	***Course Conclusion*** *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*
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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