



COURSE OVERVIEW ME0323 Coalescer Filter

Course Title

Coalescer Filter

Course Date/Venue

Session 1: February 23-27, 2025/Boardroom 1,
Elite Byblos Hotel Al Barsha, Sheikh
Zayed Road, Dubai, UAE

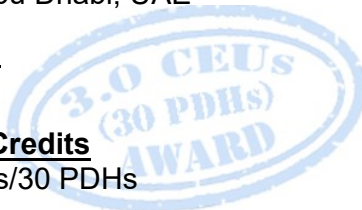
Session 2: August 25-29, 2025/Fujairah Meeting
Room, Grand Millennium Al Wahda
Hotel, Abu Dhabi, UAE

Course Reference

ME0323

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 Aviation Jet A1 (Kerosene) Coalescer Filters. It covers the jet A1 including the kerosene type jet fuel (jet A1) 300, composition, octane and color and the need for coalescing and filtration; the filter separator vessels, vertical filter/separators and horizontal filter/separators; the coalescer cartridges, separator cartridges, pleated media filter and disposable cartridges; the permanent filter core, fiberglass filter and natural gas filter; and the clay canister, fuel monitor cartridges and aviation fuel filter cartridges.



During this interactive course, participants will learn the pre-coat filters applications; the system for applying and maintaining correct media level on the media supports, system for discharging spent media and contaminants to a slops tank and system for mixing suspensions of media with aviation fuel; the filter water separators, set of coalescer and separator elements and differential pressure gauge; the automatic fuel shut off valve, differential pressure shut-off feature and differential pressure alarm; the inspection and testing, painting and preservation and documentation special tools and spare parts; and the fuel monitors, nameplates and technical information.



Course Objectives

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

- Apply and gain an in-depth knowledge on aviation jet A1 (kerosene) coalescer filters
- Discuss jet A1 covering the kerosene type jet fuel (jet A1) 300, composition, octane and color and the need for coalescing and filtration
- Identify the filter separator vessels, vertical filter/separators and horizontal filter/separators
- Recognize coalescer cartridges, separator cartridges, pleated media filter and disposable cartridges
- Differentiate permanent filter core, fiberglass filter, natural gas filter, clay canister, fuel monitor cartridges and aviation fuel filter cartridges
- Carryout pre-coat filters applications and recognize the system for applying and maintaining correct media level on the media supports, system for discharging spent media and contaminants to a slops tank and system for mixing suspensions of media with aviation fuel
- Identify filter water separators, set of coalescer and separator elements and differential pressure gauge
- Discuss automatic fuel shut off valve, differential pressure shut-off feature and differential pressure alarm
- Apply inspection and testing, painting and preservation and documentation special tools and spare parts
- Recognize fuel monitors, nameplates and technical information

Exclusive Smart Training Kit - H-STK®



Participants of this course will receive the exclusive "Howard 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 aviation jet A1 (kerosene) coalescer filters for engineers, senior technicians, mechanics, electricians, operators, and maintenance staff of heavy and light vehicles as well as aviation operation maintenance staff.

Course Fee

US\$ 5,500 per Delegate + **VAT**. This rate includes H-STK® (Howard Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.


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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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.

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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 - Page 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 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. Basem Al-Qarout is a **Senior Process & Chemical Engineer** with over **35 years** of extensive teaching and field industrial experience. His expertise covers **Fundamentals of Process Operations, Hydrocarbon Processing, Process Plant Start-Up & Commissioning, Crude Oil & Refinery Products, Sampling & Feed/Product Quality, Process Troubleshooting & Problem Solving, Separation of Oil/Gas/Water, Oil Field Operations, Gas Field Operations, Oil Production, Gas Processing, Process Equipment Design, Operation of Process Equipment, Hydro-Treating, Hydro-Forming, Hydro-Cracking and Catalyst Technology.** Furthermore, he is also well-versed in **P&ID and Wiring Schematics Rotating Equipment-Machinery (Pumps, Compressors, Turbines, Fans & Blowers, Electric Motors, Gears & Transmission Equipment), Static Equipment-Stationary, (Heat Exchangers, Distillation Column, How Trays Work, Process Heaters/Furnaces, Reboilers, Condensers, Piping System, Valves) and Process Control & Instrumentation (Process Control, Instrumentation, Control Valves).**

During Mr. Al-Qarout's career life, he has handled challenging positions wherein he has acquired his thorough practical and academic experience as the **Technical Instructor, Senior Production Foreman, Panel Operator at Hydro Cracking Plant and Plant Foreman** of various companies such as **Mellitah Oil and Gas B.V., KNPC, Chevron, Jordan Refinery Company and Libya Oil Center.**

Mr. Al-Qarout has a **Diploma in Chemical Engineering** from the **Polytechnic University in Jordan.** Further, he is **Certified by City & Guilds as Level 2 & 3 NVQ Processing Operations: Hydrocarbons Assessor** and a **Certified Instructor by Howard Technology Train-the-Trainer Program.**



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

0800 – 0830	Registration & Coffee
0830 – 0845	Welcome & Introduction
0845 – 0900	PRE-TEST
0900 – 0930	Jet A1 Meaning of Jet A1 • Kerosene Type Jet Fuel (Jet A1) 300 • Composition of Jet A1
0930 – 0945	Break
0945 – 1100	Jet A1 (cont'd) Octane and Color of Jet A1 • Need for Coalescing and Filtration
1100 – 1215	Filter Separator Vessels Filter/Separator • Vertical Filter/Separators
1215 – 1230	Break
1230 – 1350	Filter Separator Vessels (cont'd) Horizontal Filter/Separators
1350 – 1400	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
1400	Lunch & End of Day One

Day 2

0800 – 0930	Cartridges Coalescer Cartridges for Aviation Fuel and Industrial Use • Separator Cartridges Filter/Separator 2nd Stage • Pleated Media Filter • Disposable Cartridges
0930 – 0945	Break
0945 – 1100	Cartridges (cont'd) Permanent Filter Core • Fiberglass Filter • Natural Gas Filter • Clay Canister • Fuel Monitor Cartridges • Aviation Fuel Filter Cartridges
1100 – 1215	Pre-coat Filters Applications Filter • Initial Media Fill • System for Applying and Maintaining Correct Media Level on the Media Supports • System for Discharging Spent Media And Contaminants to a Slops Tank • System for Mixing Suspensions of Media with Aviation Fuel
1215 – 1230	Break
1230 – 1350	Pre-coat Filters Applications (cont'd) Differential Pressure Gauge • Relief Valve • Automatic Air Vent • Pumps and Motors as Required by the Manufacturer's Design • Auxiliary Pipework • Inspection and Testing • Painting and Preservation • Documentation • Special Tools and Spare Parts
1350 – 1400	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
1400	Lunch & End of Day Two





Day 3

0800 – 0930	Filter Water Separators Separator • Set of Coalescer and Separator Elements • Differential Pressure Gauge
0930 – 0945	Break
0945 – 1100	Filter Water Separators (cont'd) Relief Valve • Automatic Air Vent • Automatic Water Drain Valve
1100 – 1215	Filter Water Separators (cont'd) Automatic Fuel Shut Off Valve (When Specified on the Data Sheet) • Differential Pressure Shut-Off Feature (When Specified on the Data Sheet) • Differential Pressure Alarm (When Specified on the Data Sheet)
1215 – 1230	Break
1230 – 1350	Filter Water Separators (cont'd) Inspection and Testing • Painting and Preservation • Documentation Special Tools and Spare Parts
1350 – 1400	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
1400	Lunch & End of Day Three

Day 4

0800 – 0930	Fuel Monitors Monitor • Set of Elements
0930 – 0945	Break
0945 – 1100	Fuel Monitors (cont'd) Differential Pressure Gauge • Relief Valve
1100 – 1215	Fuel Monitors (cont'd) Automatic Air Vent • Inspection and Testing
1215 – 1230	Break
1230 – 1350	Fuel Monitors (cont'd) Painting and Preservation • Documentation • Special Tools and Spare Parts
1350 – 1400	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
1400	Lunch & End of Day Four

Day 5

0800 – 0900	Nameplates Manufacturer's Name and Serial Number • Design Code, Pressure (Bar G) and Temperature (°C) • Hydrostatic Test Pressure (Bar G)
0900 – 0930	Nameplates (cont'd) Rated Capacity • Quantity and Stock Number of the Elements • Date of Manufacture
0930 – 1000	Technical Information Fuel & Oil Filtration Laboratory • Frequently Used Conversions • Filter Sizing Information • Oil Viscosity Characteristics • Clay Element
1000 – 1005	Break



1005 - 1130	Technical Information (cont'd) API/IP 1581 5th Edition Specification Summary • Pressure Drop Curve with "Spent" Coalescer Cartridges • Maintenance Instructions Teflon Coated Screen Separator Elements • Auto Air Eliminator & Pressure Relief Valve
1130 - 1145	Course Conclusion Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course
1145 - 1200	POST-TEST
1200	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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