



COURSE OVERVIEW PE0127 Operations Abnormalities & Plant Upset

Course Title

Operations Abnormalities & Plant Upset

Course Date/Venue

February 11-15, 2024/Zumrut Meeting Room,
Divan Istanbul Sisli, Istanbul, Turkey

Course Reference

PE0127

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.



Managing Manpower effectively and assess risk properly during plant upset are key effective factors when reacting with incidents. Incidents may start minor and become major by wrong reaction and wrong decisions. The aim of this course is to make everybody involved in the operations know exactly what to do. The incident itself may cause a certain loss, but with wrong reaction it became a massive loss. Understanding operation, effective emergency/contingency plan, rules of each one within emergency plan and makes emergency tools ready and in operational condition are the main aims of this course. One approach to overcome any incident development is to prepare yourself and emergency team to treat incidents situation professionally.



Upon review of several incidents, two common causes were identified that contributed to those incidents. The causes are improper management of manpower during upset conditions and improper risk assessment of activities to be executed or stop doing. However, on close examination the trained emergency team and correct managing of the incident besides using correct emergency tools will minimize the loss and accidents consequences.

Effective training is the necessary foundation for the successful implementation of optimum emergency managing condition and optimum consequences minimizing. This course will train participants on managing risk & manpower during plant upset to save lives, assets and company reputations.

Course Objectives

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

- Manage manpower effectively and assess risk properly during the abnormalities of the operations and plant upset
- Assess staffing level in abnormal situations and distribute manpower during plant upset conditions
- Manage shift teams, assess risk of non-routine activities and manage operational crisis
- Identify risks in the process and describe the roles, responsibilities and procedures in emergency management
- Use the risk assessment process and have enough skills in monitoring and auditing the emergency tools
- Recognize the training requirements for process emergency handling including emergency team building
- Discuss the various skills that will be acquired in controlling emergency management using different scenarios and matrix
- Identify the common mistakes during emergencies and employ the preventive measures

Who Should Attend

This course provides an overview of all significant aspects and considerations of operations abnormalities and plant upset for superintendents, supervisors and foremen in various departments of process plants (production, operations, maintenance, utility, etc.). Further, the course is suitable for emergency teams, managers, supervisors and other technical staff.

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\$ 6,000 per Delegate + **VAT**. This rate includes Participants Pack (Folder, Manual, Hand-outs, etc.), 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: -

- 
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.

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. Robert Harvey, MSc (Cum Laude), BSc is a **Senior Process & Chemical Engineer** with over **45 years** of in-depth industrial experience within the **Oil & Gas, Refinery, Petrochemical, Mining** and **Power** industries. His expertise widely covers in the areas of **Operations Abnormalities & Plant Upset, Fertilizer Manufacturing** Process Technology, **Fertilizer Storage** Management (Ammonia & Urea), **Petrochemical & Fertilizer Plants, Nitrogen Fertilizer** Production, **Petroleum Industry Process** Engineering, **Process Equipment** Design & Troubleshooting, **Process Equipment & Piping Systems, Fertilizer Manufacturing** Process Technology, **Production** Management, **Process Plant** Optimization & Continuous Improvement, **Production Process** Optimization, **Process Analyzers, Process Equipment** Design, Vinyl Chloride Monomer (**VCM**) Manufacturing & Process Troubleshooting, **Cement** Manufacturing Process Technology & Standards, **Process Equipment & Piping** System, **Process Plant** Optimization & Continuous Improvement, **Process Plant** Performance & Efficiency, **Troubleshooting Process Operations**, Modern **Aluminium Production Processes, Cement Kiln Process, Process Engineer Calculations**, Steel Making Process, **Process Diagrams** Review, Process Hazard Analysis (**PHA**), Process Mapping, Strategic Process Control in Process Industry, **Revamping & Debottlenecking, Pressure Vessel** Operation, **Heat Mass Balance, Distillation-Column** Operation, & Troubleshooting, **Debottlenecking, Unit Performance** Optimization, Real Time Online Optimization, **Operations Planning** Optimization, **Engineering Problem Solving, Bag Filters** Operation & Maintenance, Chemical Reaction Engineering Application, **Phosphatic Industry, Diammonium Phosphate, Monoammonium Phosphate, NPK**, Troubleshooting Improvement, **Production** Management, **Distillation-Column** Operation & Troubleshooting, **Monomer** Handling Safety, Complex Operational Troubleshooting, Incident **Root Cause Analysis** & Corrective Action, **Fertilizer** Manufacturing, Continuous Improvement & Benchmarking, **Energy Efficiency** for Process Plants, **Pressure Vessel** Operation, **Reactors & Storage Tanks**, Dehydrating Columns, Heat & Material Balance, **P&ID** Reading & Interpretation, **Detailed Engineering Design, HAZOP** Leadership, Project HSE Review (**PHSER**), Safe Handling of **Propylene Oxide & Ethylene Oxide**, Safety in **Process & Industrial Plants**, Environmental Impact Assessment (**EIA**) and Effective **Risk Assessment & HAZOP** Studies. Further, he is also well versed in Feasibility Studies Analysis & Evaluation, Project Gate System Procedures, Change Management Skills, Change Management Strategy, Developing Commercial Contracts, Project Management Skills, Project Scheduling & Cost Control, FIDIC & Other Model Contracts, EPC & EPCM Contracts, Knowledge Management, Job Evaluation, Creative Problems Solving & Innovation Skills, Problem Solving & Decision Making, Strategic Planning & Creative Thinking and Mind Mapping.

During his career life, Mr. Harvey has gained his practical and field experience through his various significant positions and dedication as the **Commercial Director, Manufacturing Director, Chief Operating Officer, Head Projects Division, Project Leader, Lead Technical Advisor/Consultant** and **Project Consultant** to various international companies such as the Trade and Industrial Policy Strategies (TIPS), PGBI Johannesburg, IDC Green Industries SBU/Arengo 316 Pty Ltd, Ferrum Crescent Limited, CEF Limited, Rio Tinto Alcan, Industrial Development Corporation of SA (IDC) and AECI Limited.

Mr. Harvey has **Master (Cum Laude)** and **Bachelor** degrees in **Chemical 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, seminars, conferences, workshops and courses globally.





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, 11th February 2024

0730 – 0800	<i>Registration & Coffee</i>
0800 – 0815	<i>Welcome & Introduction</i>
0815 – 0830	PRE-TEST
0830 – 0930	Introduction
0930 – 0945	<i>Break</i>
0945 – 1100	Understanding Operational Principles & Why Plants Get Upset
1100 – 1230	Roles & Responsibilities
1230 – 1245	<i>Break</i>
1245 – 1420	Emergency Team Buildings & Responsibilities of Each Member - Case Study
1420 – 1430	Recap
1430	<i>Lunch & End of Day One</i>

Day 2: Monday, 12th February 2024

0730 – 0900	How Incidents Develop & Common Reasons
0900 – 0915	<i>Break</i>
0915 – 1100	Review of Several Incidents <i>Two Common Causes were Identified that Contributed to those Incidents</i>
1100 – 1230	Improper Management of Manpower During Upset Conditions
1230 – 1245	<i>Break</i>
1245 – 1420	Improper Management of Manpower During Upset Conditions (cont'd)
1420 – 1430	Recap
1430	<i>Lunch & End of Day Two</i>

Day 3: Tuesday, 13th February 2024

0730 – 0930	Root Cause Analysis (RCA)
0930 – 0945	<i>Break</i>
0945 – 1100	Risk Register
1100 – 1215	Incidents Development Scenarios - Discussion
1215 – 1230	<i>Break</i>
1230 – 1420	Incidents Development Scenarios - Discussion (cont'd)
1420 – 1430	Recap
1430	<i>Lunch & End of Day Three</i>

Day 4: Wednesday, 14th February 2024

0730 – 0930	Emergency Team Building & Improper Management of Manpower During Upset Conditions
0930 – 0945	<i>Break</i>
0945 – 1100	Improper Risk Assessment of Operation Conditions During Plant Upset





1100 – 1215	Risk Assessment & Risk Evaluation <i>Risk Matrix</i>
1215 – 1230	<i>Break</i>
1230 – 1420	Recognizing Key Points & Controlling Elements in Different Process
1420 – 1430	Recap
1430	<i>Lunch & End of Day Four</i>

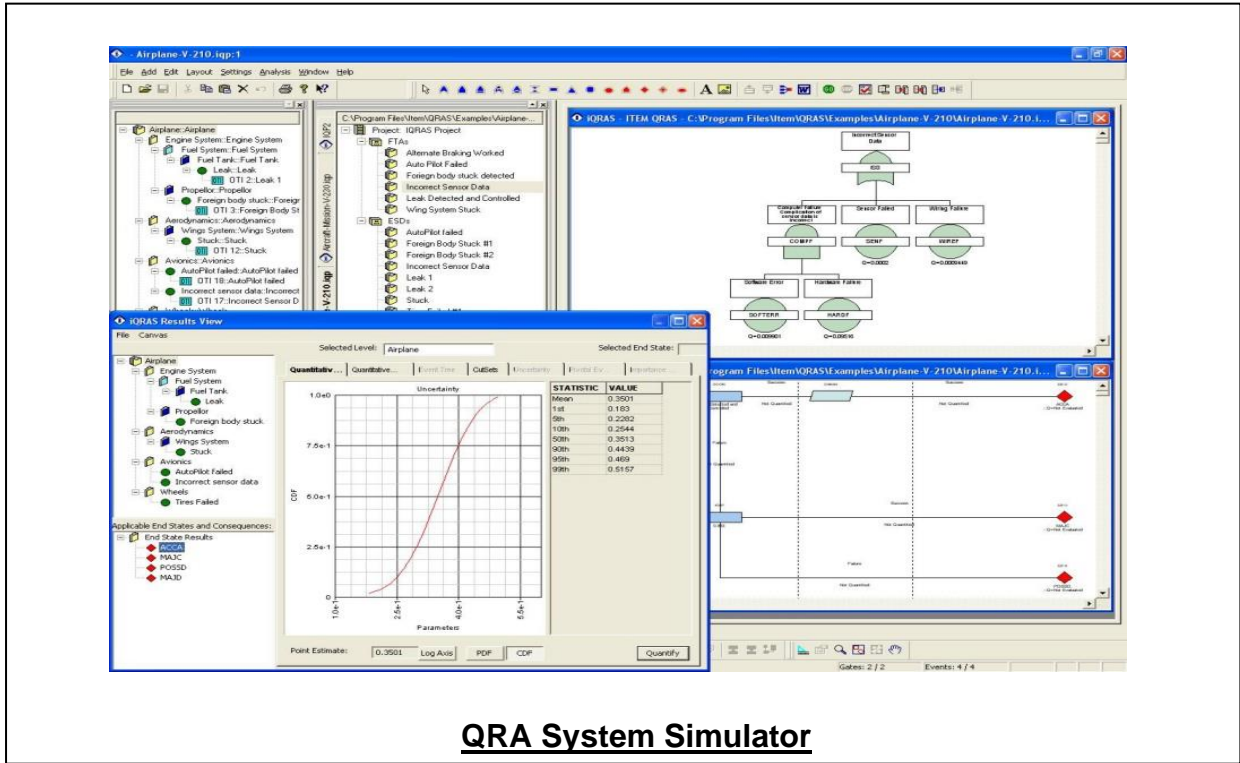
Day 5: Thursday, 15th February 2024

0730 – 0930	Building Successful Emergency Team & Each One Roles & Responsibilities
0930 – 0945	<i>Break</i>
0945 – 1100	Closing Gaps & Correcting Scenarios
1100 – 1215	Closing Gaps & Correcting Scenarios (cont'd)
1215 – 1230	<i>Break</i>
1230 – 1345	Case Study & Discussion
1345 – 1400	Course Conclusion
1400 – 1415	POST-TEST
1415 – 1430	<i>Presentation of Course Certificates</i>
1430	<i>Lunch & End of Course</i>



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 our state-of-the-art “QRA System” simulator.



QRA System Simulator

Course Coordinator

Kamel Ghanem, Tel: +971 2 30 91 714, Email: kamel@haward.org

