



COURSE OVERVIEW RE0930 **Refinery Shutdown, Turnaround & Troubleshooting**

Course Title

Refinery Shutdown, Turnaround & Troubleshooting

Course Date/Venue

September 14-18, 2025/Tamra Meeting Room, Al Bandar Rotana Creek, Dubai, UAE

Course Reference

RE0930

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.

The process industry is losing over half a billion dollars of profits a year due to poor turnaround results and missed opportunities. The majority of turnarounds lacked strategic focus and front-end planning. In addition, turnaround teams lacked leadership and were understaffed. The major negative factor is the growing gap between higher turnaround performance expectations and rapidly shrinking qualified resources to manage the turnarounds. As a result, the planning effort not only starts late, but it is also ineffective, and typically does not contribute in the turnaround success.



This course is designed to bridge the above-mentioned gap. It will provide turnaround managers and engineers with enough knowledge and skills to understand the purpose of the turnaround, to properly plan and manage the turnaround, and to achieve exponential results of their turnaround project. The course will teach participants how to establish a systematic turnaround management processes and procedures that incorporate the best turnaround practices, planning techniques and execution strategies.



Turnaround results have a long-term effect on the facility's operational reliability and it dictates the plant's operational efficiency and business survival in the competitive global market. The turnaround performance can be dramatically improved if companies focus on key issues such as strategic planning, selection of qualified contractors, synergistic and innovative organizations, and tactical initiative to improve field productivity.



The course will cover the emerging industry trends, turnaround benchmarking and the challenges faced by plant executives to consistently achieve pacesetter results on plant shutdowns and turnarounds. We will teach you how to fairly balance your business, marketing and financial goals with your plant needs for mechanical integrity and operational reliability. We will show you how to focus on risk areas, early work scope definition, high-performance initiatives, the assignment of qualified staff and the best practice contracting strategy. Upon the completion of this course, you will have good knowledge to perform World-Class turn arounds.

Course Objectives

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

- Apply systematic techniques in the shutdown, turnaround and troubleshooting of process plants
- Implement the special needs of time constrained projects (24/7)
- Identify the work to be accomplished for the shutdown project
- Plan to meet deadlines & complete turnaround projects on time within budget
- Apply shutdown best practices
- Plan, lead, organize, control and co-ordinate shutdown type projects
- Schedule the work effectively
- Manage resources effectively
- Implement feedback systems
- Identify risks and manage these effectively
- Reporting and documenting the shutdown activity
- Recognize the use of software packages

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 is intended for those involved directly or indirectly in the plant shutdown and turnaround operations. This includes maintenance and project staff such as managers, engineers, planners, supervisors and other technical people.

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

Haward's 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**. Haward's certificates are internationally recognized and accredited by the British Accreditation Council (BAC). 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.

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 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. Dimitry Rovas, CEng, MSc, PMI-PMP, SMRP-CMRP, is a **Senior Maintenance Engineer** with extensive industrial experience in **Oil, Gas, Power and Utilities** industries. His expertise includes **Process Plant Shutdown & Turnaround, Maintenance Optimization & Best Practices, Maintenance Auditing & Benchmarking, Reliability Management, Reliability Centered Maintenance Principles & Application, Machinery Lubrication, Maintenance Planning & Scheduling, Coupling & Shaft Alignment Techniques, Maintenance Management & Cost Control, Preventive & Predictive Maintenance, Effective Reliability Maintenance & Superior Maintenance Strategies, Integrity & Asset Management, Reliability,**

Availability & Maintainability (RAM), Total Plant Reliability Centered Maintenance, Turnaround & Outages, Process Plant Shutdown, Turnaround & Troubleshooting, Shutdown & Turnaround Management, Integrity & Asset Management, Maintenance Management Best Practices, Material Cataloguing, Maintenance Planning & Scheduling, Effective Reliability Maintenance, Maintenance Contracting & Outsourcing, Maintenance Inventory, Materials Management, Mechanical & Rotating Equipment Troubleshooting & Maintenance, Rotating Equipment Reliability Optimization, Computerized Maintenance Management System (CMMS), Material Cataloguing & Specifications, Rotating Equipment Maintenance & Troubleshooting, Pump Technology, Pump Selection & Installation, Reciprocating & Centrifugal Compressors, Gas & Steam Turbines, Turbine Operations, Valves, Bearings & Lubrication, Rubber Compounding, Elastomers, Thermoplastic, Industrial Rubber Products, Rubber Manufacturing Systems, Heat Transfer, Vulcanization Methods, Energy Conservation, Energy Loss Management, Energy Saving, Thermal Power Plant Management, Cogeneration Power Plant Installation & Commissioning, Auxiliary Steam Boilers Troubleshooting, Piping Racks (Steel Structure, Valves, Pipe Supports) Commissioning, Firefighting Systems, Steel & Welded Tanks, Aluminium Logistics Facilities (Cranes, Laydown Areas, Port Facilities, etc), Equipment Heavy Lifting, Long Term Storage of Equipment, Heat Transfer, Fluid Mechanics, Heating & Cooling Systems, Heat Insulation Systems, Heat Exchanger & Cooling Towers, Mechanical Erection and Heavy Rotating Equipment. He is currently the **Project Manager** wherein he is managing, directing and controlling all activities and functions associated with the domestic heating/cooling facilities projects.

During his life career, Mr. Rovas has gained his practical and field experience through his various significant positions and dedication as the **EPC Project Manager, Maintenance Manager, Mechanical Engineer, Field Engineer, Preventive Maintenance Engineer, Lead Rotating Equipment Commissioning Engineer, Construction Commissioning Engineer, Offshore Lead Maintenance Engineer, Researcher, Instructor/Trainer, Telecom Consultant and Consultant** from various companies such as the Mytilineos Aluminium Group, Podaras Engineering Studies, Metka and Diadikasia, S.A., **Hellenic Petroleum Oil Refinery** and COSMOTE.

Mr. Rovas is a **Chartered Engineer** of the **Technical Chamber of Greece**. Further, he has **Master** degrees in **Mechanical Engineering** and **Energy Production & Management** from the **National Technical University of Athens**. Moreover, he is a **Certified Instructor/Trainer**, a **Certified Maintenance and Reliability Professional (CMRP)** from the Society of Maintenance & Reliability Professionals (SMRP), a **Certified Project Management Professional (PMP)**, a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management (ILM)** and a **Certified Six Sigma Black Belt**. He is an active member of Project Management Institute (PMI), Technical Chamber of Greece and Body of Certified Energy Auditors and has further delivered numerous trainings, seminars, courses, workshops and conferences 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: Sunday, 14th of September 2025

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	PRE-TEST
0830 – 0900	Introduction & Fundamentals Introduction to PM: What is a Project? • PM Associations & Body of Knowledge • Project Management Body of Knowledge (PMBOK) • Project Management Elements • Projects Environment • Project Life Cycle Phases • Project Managers Job profile • Project Manager Job Description • Project Management Skills • Project Management Toolkit
0900 – 0915	Planning the Shutdown Identifying the Work • Starting Your Project • Project Charter/Project Document • Defining & Limiting the Scope • Constraints of the Shutdown
0915 – 0945	Prioritizing the Proposed Work Identifying the Work • Review the Maintenance Backlog • Jobs Not Requiring a Shutdown • Equipment History • Predictive Maintenance (PDM) Records • Preliminary Work of Shutdown • Walk-downs & Check Lists • Solicit the Input of Others • Reviewing Shutdown Files • Identify Start-up Activity • Compiling Identified Work
0945 – 1000	Break
1000 – 1030	Sources of Shutdown Work & Shutdown Project Parameters Class Task
1030 – 1100	Risk Management Staffing Assumptions • Estimate Risks • Commercial Data • Procurement Problems • Project Risk Management - Model
1100 – 1200	Risk Management Plan Identify Risks Throughout the Project • Develop Risk Assessment Criteria • Tabulate The Risks • Prepare Standby Plans or Alternatives
1200 – 1230	The Project Managers Role
1230 – 1245	Break
1245 – 1330	Quality Control Plan & Project Quality Management



1330 - 1400	Quality Management Group Task
1400 - 1420	Shutdown Manager's Skills
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: Monday, 15th of September 2025

0730 - 0930	Planning Processes Doing the Right Work • Doing The Work Right • Doing The Work at the Right Time
0930 - 0945	Break
0945 - 1015	What is the Difference Between Planning & Scheduling? What is Scheduling? • Planning Objectives • Planning Tools Cycle
1015 - 1045	Project Management Toolkit Project Plan • Shutdown Plan
1045 - 1115	Shutdown Definition The Shutdown Work Breakdown Structure • The Project WBS - It's Uses • The Project Work Breakdown Structure • The Shutdown Budget • The Project OBS • The Shutdown OBS • The Shutdown WBS
1115 - 1130	The Shutdown WBS & SOW Group Task
1130 - 1200	Planning Thought Process What Must Happen First on the Job? • Who Must Do This Step? • How Many People Are Required? • What Parts, Materials, or Supplies Will Be Needed? • Is Any Support Equipment Required? • How Long Will It Take? • What Must Happen Next on this Job? • Documentation
1200 - 1215	Determining Contract Work Technical Support • Non-technical Support • Work That Can Be Performed Off-site • Work Requiring Special Equipment • Activities from WBS • Activities Data • Task Duration - PERT Method • Activity Work Content & Costing/Pricing
1215 - 1230	Break
1230 - 1330	Base Line Plan with Budget Approval Networks For Activity Logic - Overview & Convention • Shutdown- Early Start Calculations - Forward • Project Plan - Late Start Calculations-backwards, Float Calculations - Subtract & Network to Gantt Chart • Common Network Errors • Schedules • Milestones
1330 - 1420	Base Line Plan with Budget Approval (cont'd) Resource Utilization • Milestone Plan & Chart • Resource Utilization • Resource Loading & Leveling • Schedules: Resource Requirements • Manual Load Leveling
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 Two



Day 3: Tuesday, 16th of September 2025

0730 – 0900	Base Line Plan with Budget Approval (cont'd) Leveling Other Resources • Resource Utilization • Budgets & Committed Cash Flow • Tracking Project Costs • The Basic Principle • Base Line Plan
0900 – 0930	Shutdown – Network Logic, Schedules: Committed Cash Flow & Schedules: Actual Projected Cash Flow Group Task
0930 - 0945	Break
0945 - 1015	Organizing & People Management Shutdown Toolkit • The Shutdown Organisation • Organizing Tools & Techniques • Most Important Communications • Tender / Contract Clause Coverage • Parts, Material & Equipment • Material & Equipment Responsibility
1015 - 1115	Organizing & People Management (cont'd) Tracking Long Delivery Items • Accounting • Reporting Structure • Assigning Responsibility • Shutting Down Meeting • Organization Breakdown Structure (OBS)
1115 - 1145	Organizing Group Task
1145 – 1215	The Matrix Organisation Administration • Communication • Forms, Formats & Files • Project File • Shut Down Toolkit- Resource Utilization
1215 – 1230	Break
1230 – 1330	Leadership Tools & Techniques Team Selection – Organisation • - Motivation • - Shutdown Sponsor Role
1330 – 1420	Execution & Feedback The Execution Phase • Shutdown Practical Execution Issues • Feedback on Project Status • Job Status Update • Feedback on Project Status • Feedback on Project Status: Costs
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: Wednesday, 17th of September 2025

0730 – 0930	Execution & Feedback (cont'd) Project Practical Control • Project Review Meeting • Materials Management • Staging/Rigging • Shutdown Safety • OSHA Requirements
0930 - 0945	Break
0945 – 1015	Quality Control Plan (QCP) Information Cost of Quality • Inspection Reports • Activity Inspection Results • Quality Control Sheet
1015 – 1100	Quality Group Task



1100 – 1230	Proven Turnaround Practices <i>The Nature of Turnaround/Shutdown Project Management • The Environment In Which a Turnaround/Shutdown Takes Place • Turnaround/Shutdown Success Factors • More Success Factors • Similar Planning Approach To Projects • Elements of a Turnaround/Shutdown • Turnaround/Shutdown Toolkit • The Work Breakdown Structure (WBS) & the Organization Breakdown Structure (OBS) • Identifying the Work • General Shutdown/Turnaround Checklist • Planning A Plan • Milestone Plan • Milestone Chart • Work Scope • Budgets & Cost Control • Projects</i>
1230 - 1245	Break
1245 - 1400	Proven Turnaround Practices (cont'd) <i>Materials • Process Operations • Pre-shutdown/Pre-turnaround Reviews • Safety • Typical Safety Questions That Should Be Asked • Inspection • Contracting • Quality: What is Required? • Quality Control Plan (QCP) • Quality Control Plan (QCP) Inspection Report • Quality Control Sheet • Risk Management • Shutdown/Turnaround Practices Discussion</i>
1400 – 1420	Control of Shutdown <i>Control Tools & Techniques • Tracking Project Costs • Project Practical Control • Controlling • Control – Overview • Control: CSCS = Cost Schedule Control System • Control Cycle –CSCS • CSCS Illustrative Graph • Scope Control</i>
1420 – 1430	Recap <i>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</i>
1430	Lunch & End of Day Four

Day 5: Friday, 18th of September 2025

0730 - 0930	Control of Shutdown (cont'd) <i>Shutdown & Turnaround • Shutdown Acceleration • Project Acceleration • Contractor Controls • Control Tools & Techniques • Tracking Project Costs • Project Practical Control • Controlling • Control – Overview</i>
0930 - 0945	Break
0945 - 1015	Control of Shutdown (cont'd) <i>Control: CSCS = Cost Schedule Control System • Control Cycle –CSCS • CSCS Illustrative Graph • Scope Control • Shutdown & Turnaround • Shutdown Acceleration • Project Acceleration • Contractor Controls</i>
1015 - 1030	Accelerating a Project & Start-up & Handover <i>Group Task</i>
1030 – 1100	Start-up & Handover <i>Elements of Handover • Contactor Handover • Final Report • Conclusion</i>
1100 – 1200	Use of Computer & Software <i>Project Management Software • Sorting & Communicating Information</i>
1200 – 1230	Using Microsoft Project & Shutdown Workshop <i>Group Task</i>
1230 – 1245	Break



1245 – 1345	Typical Causes of Shutdown Failure <i>Work not Clearly Defined • Risks not Analysed or Managed with Contingency Plans • No Baseline Plan –Poor or Non-existent Planning • Lack of Scope Management • Poor Leadership • Not Taking Environmental needs into the Plan • Focus on Critical Path items only- the Rest Catch up with you</i>
1330 – 1345	Course Conclusion <i>Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course</i>
1345 – 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 the “MS Project” and “Mindview Software”.





Mind map

Word

Mindview Software

Course Coordinator

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