

Training Title

REFINERY PROCESS PLANT TROUBLESHOOTING, PROBLEM SOLVING, SAFE START-UP & SHUT DOWN

Training Duration

5 days

Training Venue and Dates

RE051	Refinery Process Plant Troubleshooting, Problem Solving, Safe Start-Up & Shut Down	5	17 – 21 Feb. 2025	\$5,500	Dubai, UAE
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In any of the 4 or 5-star hotels. The exact venue will be informed once finalized.

Training Fees

- **\$5,500 per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Lunch.**

Training Certificate

Define Management Consultancy & Training Certificate of course completion will be issued to all attendees.

COURSE DESCRIPTION

In the complex world of refinery operations, effective troubleshooting and problem-solving are crucial for ensuring safety, efficiency, and reliability. This course provides participants with essential skills and knowledge to identify and address common issues in refinery processes, focusing on safe start-up and shut-down procedures.

Key topics include:

- **Refinery Operations Overview:** Understanding the main processes, equipment, and safety regulations.
- **Troubleshooting Techniques:** Learning root cause analysis and failure mode effects analysis to pinpoint and resolve problems.
- **Problem Solving Strategies:** Developing skills for effective data collection, decision-making, and risk assessment.
- **Safe Start-Up Procedures:** Implementing a structured approach to ensure safe and efficient initiation of refinery units.
- **Safe Shut Down Procedures:** Understanding the critical steps to safely shut down operations and conduct post-shut down maintenance.

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By the end of this course, participants will be equipped to enhance operational safety and efficiency in their refinery environments.

COURSE OBJECTIVE

After completing this course the participants will have:

- **Understand Refinery Operations:** Describe key processes, equipment, and safety regulations in refinery settings.
- **Apply Troubleshooting Techniques:** Utilize root cause analysis and failure mode effects analysis to identify and resolve common operational issues.
- **Implement Problem-Solving Strategies:** Collect and analyze data effectively to make informed decisions and assess risks.
- **Execute Safe Start-Up Procedures:** Demonstrate the ability to follow structured protocols for safely initiating refinery operations.
- **Conduct Safe Shut Down Procedures:** Identify and perform essential steps for safe shut down and post-shut down maintenance.
- **Enhance Operational Safety:** Recognize and mitigate risks associated with refinery operations to improve overall safety and efficiency.

WHO SHOULD ATTEND

- Refinery Operators
- Process Engineers
- Safety Personnel
- Maintenance Technicians
- Quality Assurance Staff
- Management and Supervisors

TRAINING METHODOLOGY: www.definettraining.com

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions and motivating everybody find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course.

All presentations are made in excellent colorful power point. Very useful Course Materials will be given.

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- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work & Practical Exercises
- 20% Videos & General Discussions

COURSE OUTLINE

Day 1: Introduction to Refinery Operations and Safety

- **Overview of Refinery Processes**
 - Crude distillation, conversion, treatment, and finishing.
- **Key Equipment and Components**
 - Reactors, distillation columns, heat exchangers.
- **Safety Regulations and Standards**
 - OSHA, EPA, and NFPA guidelines.
- **Introduction to Troubleshooting**
 - Importance and common issues.

Day 2: Troubleshooting Techniques

- **Root Cause Analysis (RCA)**
 - Methods and tools for identifying issues.
- **Failure Mode and Effects Analysis (FMEA)**
 - Understanding potential failures and impacts.
- **Practical Exercises**
 - Case studies and hands-on troubleshooting scenarios.

Day 3: Problem Solving Strategies

- **Problem Identification and Analysis**
 - Data collection and observation.
- **Decision-Making Frameworks**
 - Cost-benefit analysis and risk assessment.
- **Group Activity**
 - Team-based problem-solving exercises.

Day 4: Safe Start-Up Procedures

- **Pre-Start-Up Safety Review (PSSR)**
 - Components and significance.
- **Step-by-Step Start-Up Procedures**
 - Safety checks and system verifications.
- **start-up of a simulated refinery unit.**

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Day 5: Safe Shut Down Procedures and Course Wrap-Up

- **Importance of Safe Shut Down**
 - Risks and consequences of improper procedures.
- **Step-by-Step Shut Down Procedures**
 - Controlled vs. emergency shut down.
- **Best Practices for Post-Shut Down**
 - Maintenance and safety checks.

NOTE:

Pre & Post Tests will be conducted

Case Studies, Group Exercises, Group Discussions, Last Day Review & Assessments will be carried out.



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