

# € TRAINING

Managing Efficient Shutdowns &  
Turnarounds



8 - 12 September 2024  
Cairo (Egypt)



# Managing Efficient Shutdowns & Turnarounds

REF: O920 DATE: 8 - 12 September 2024 Venue: Cairo (Egypt) - Fee: 4465 Euro

## Introduction:

Planning and managing shutdowns, turnarounds, and outages in the process plant environment is a complex and demanding function. If turnarounds are not properly planned, managed, and controlled, companies run the risks of serious budget overruns, costly schedule delays, and negative impacts on customers.

## Course Objectives:

At the end of this course the participants will be able to:

- Enhance the company's turnaround management capabilities, and to ensure a team approach in the planning and execution of plant shutdowns and turnarounds
- Provide a comprehensive understanding of effective turnaround management techniques and implementation
- Create awareness of planning methods and an integrated organizational approach in the execution of successful turnarounds
- Incorporate the latest developments in turnaround planning and management techniques and emerging industry trends
- Develop an action plan to improve their turnaround management techniques
- Have a much clearer understanding of their own and every other team members role in ensuring a successful turnaround

## Targeted Audience:

- Shutdown or Turnaround Professionals and Coordinators
- Planning / Scheduling and Cost Control Staff
- Construction Superintendents and Supervisors
- Operations Shutdown / Outage Coordinators
- Project Engineers and Contract Administrators
- Inspection, Materials, Safety and Maintenance Engineering Staff

## Course Outlines:

### Unit 1: The Role of Maintenance Shutdowns and Turnarounds in World-Class Organisations:

- How Shutdowns and Turnarounds can contribute to the business
- Key Success Factors
- The Three Critical paths of Shutdowns and Turnarounds
- The Difference between Shutdowns and Turnarounds and Projects
- Shutdown and Turnaround Return On Investment
- Shutdown and Turnaround Management Self-assessment
- The Shutdown and Turnaround Phases
- Reasons for Shutdowns and Turnarounds
- Success Factors

### Unit 2: Shutdown/Turnaround Preparation:

- Risk Management
- Justification Requirements
- Communications to Stakeholders
- Shutdown Roles and Organisation
- RASCI Matrix for Shutdown
- Preparation of Critical Success Factors
- Identify Routine PM to be included in Scope
- Identify Routine Condition-based tasks to be performed before Shutdown and Turnaround
- Identify Function Testing to be Performed at Conclusion of Shutdown and Turnaround

### Unit 3: Shutdown/Turnaround Preparation Continued:

- Apply CBM and Degradation Analysis to create Scope Visibility
- Apply Notification Process to manage to create Scope Visibility
- Apply Risk-based Task Selection Methods to Prioritise and Challenge Scope
- Review, Approve, Communicate and Freeze the Scope
- The Critical Outcomes of Planning
- The 5 Ms of Maintenance Work Quality
- Job Analysis and Scoping
- Estimating
- Risk and Contingency Planning
- The Use of Planning Templates
- Work Breakdown Structure

### Unit 4: Shutdown and Turnaround Schedule:

- Terms and Concepts of Scheduling
- Network Display Methods
- Apply CPM
- Identify Resource Constraints
- Resource Requirements based on CPM
- Resource Smoothing
- Resource Balancing
- Optimized Resource Profile
- Shutdown and Turnaround Budgets
- Assign Shutdown Work - In-house and Contractors
- Types of Contractors
- Types of Contracts and Criteria for Selection
- Risks Associated with the Use of Contractors
- Benefits of Using Contractors on Shutdowns
- Staying in Control of the Contractor

### Unit 5: Shutdown and Turnaround, Execution Control, and Review:

- The Shutdown Package
- Shutdown Quality Control
- Shift Schedules
- Preparing Equipment for the Shutdown
- Daily Schedules
- Dealing with Emergent and Additional Work
- Control Data

- Status Accounting
- Control the Shutdown
- S-curves
- Earned-value
- Shutdown Performance Indicators
- Shutdown and Turnaround Review Meeting Agenda
- Why do shutdowns fail?
- Problems in Shutdowns and their Origins
- Start-up and Commissioning
- Shutdown Closing Out Report
- Shutdown Closing Out Review
- Overview of Computerised Tools