



المركز العالمي للتدريب والتطوير
International Centre For Training & Development



Turnaround, Shutdown and Outage Management: Effective Planning and Step by Step Execution of Planned Maintenance Operations



ACTVET
Abu Dhabi Centre for
Technical and Vocational
Education and Training
مركز أبوظبي
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Course Introduction:

Shutdown management is project management of a special kind which includes managing the repair, replacement or maintenance of critical systems. Manufacturing and process plants, computer systems, airliners, and many other systems must be regularly closed down or taken out of service for planned maintenance operations. This course provides a complete shutdown project planning guide along with a new, detailed model of excellence and step-by-step project guide. In a critical field, this course shows the maintenance manager or project leader how to get the job done correctly.

Course Objectives:

Upon successful completion of this course, the delegates will be able to:

- Understand the aspects of major maintenance project planning, minimizing downtime and improving maintenance schedules
- Determine the projects ranging from weekend overhauls through to complete plant rebuilds
- Discuss the detailed checklists and a new step-by-step project guide

Who Should Attend?

This course is intended for maintenance engineers and supervisors, plant engineers, engineering managers, Key sectors include process and manufacturing sectors (petrochemical and food processing especially), aircraft maintenance, power generation and other utilities, large-scale assembly plants. Performance management specialists, Six Sigma readership, continuous improvement specialists, TPM.

Course Outline:

Day 1:

The Process - Turnaround Overview

- Strategy
- An engineering perspective
- The psychology of Turnarounds
- Integration
- The phases of a Turnaround

Initiating the Turnaround

- The steering group

- The purposes of the steering group
- The methodology
- The Turnaround manager
- The preparation team: membership
- Preparation team: gathering basic data
- Conclusion
- Case study

Validating the Work Scope

- Unnecessary work
- The work list meeting
- The major task review meeting
- The inspection review meeting
- Project work review meeting
- The validated work scope
- Case study

Pre-shutdown Work

- Long delivery items
- Prefabricated work
- Specialist technologies
- Vendors' representatives
- Services, utilities, accommodation and facilities
- Case study: Red Zone

Contractor Packages

- Using contractors – the upside
- Using contractors – the downside
- Contractor work packages
- Contractor availability
- Case study

Day 2:

Planning the Turnaround

- The contrast between Turnarounds and other projects
- Major tasks
- Minor tasks
- The work pack
- Bulk work

- The shutdown-start-up logic
- Work scheduling
- Optimizing the Turnaround plan
- Generating control documents
- Case study

The Turnaround Organization

- Organizational combinations
- Basic principles
- Constraints
- Scarce manpower resources
- Case study

Logistics

- Introduction
- The logistics team
- The elements of logistics
- The current disposition of the physical objects or substances
- The plot plan
- Issuing the plot plan
- Marshalling bulk work

Cost Control

- Introduction
- Why estimate a cost profile?
- The inclusions
- The exclusions
- Creating a cost estimate
- The proposed cost estimate
- The approved Turnaround budget
- Case study

The Safety Plan

- What is a hazard?
- The safety chain
- The safety communications network
- Safe system of work
- Job safety analysis (JSA)
- The safety team

- Safety inspections
- Investigating accidents
- Case study

Day 3:

The Quality Plan

- Steering group issues
- Basic quality requirements
- The elements of quality
- Quality assurance
- Quality control
- Considering joints
- Case study

The Communications Package

- Issues and consequences
- Communication
- The general briefing
- The major task briefing

Executing the Turnaround

- Shutting the plant down
- The routine
- The daily Turnaround program
- The unexpected
- Starting up the plant

Terminating the Turnaround

- Demobilizing the site
- The final inspection and handover
- Recording performance – Turnaround metrics
- The post-mortem debrief
- The final Turnaround report

Day 4:

The Model of Excellence - Real World Application

Case Study 1 — Designing an Organization

- The presenting problem
- The assessment

- The response
- A framework for action to improve
- Defining outline responsibilities
- Matching people to roles
- The outcome

Case Study 2 — Work List Control

- The presenting problem
- The assessment
- Action to improve
- The outcome

Case Study 3 — Contract Strategy

- Presenting problem
- Investigating the issue
- Generating criteria
- Generating options
- Generating the matrix
- Scoring criteria against options
- The outcome

Case Study 4 — Cost Control

- The presenting problem
- Investigating the issue
- Formulating the cost strategy
- The rational cost model
- The cost breakdown structure
- The cost model
- Outcome

Day 5:

Case Study 5 — Logistics

- The presenting problem
- The assessment
- Defining the problem
- Defining complexity
- Action plan
- Outcome

Case study 6 — Experiences In Cost/Risk Optimization

- Introduction
- Where it all began
- The big decisions
- Optimization of shutdown work requirements and intervals
- Component studies performed
- Analysis methodology
- Example component study: pilot operated relief valves
- Summary results of the key studies
- Combining individual tasks into shared downtime opportunities
- Comment from the team involved
- Implementation of the results
- Ongoing progress and further studies

Summing up—a Reality Check

- A model is a model
- Training
- Repackaging the obvious
- The fusion of knowledge
- Excellence
- A final challenge

APT-SCHEDULE

- Unique opportunity
- The analysis process
- Combining hard data with local knowledge

Course Certificate:

International Center for Training & Development (ICTD) will award an internationally recognized certificate(s) for each delegate on completion of training.

Course Methodology:

A variety of methodologies will be used during the course that includes:

- (30%) Based on Case Studies
- (30%) Techniques
- (30%) Role Play
- (10%) Concepts
- Pre-test and Post-test
- Variety of Learning Methods
- Lectures
- Case Studies and Self Questionnaires
- Group Work
- Discussion
- Presentation

Course Fees:

To be advised as per the course location. This rate includes participant's manual, Hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Timings:

Daily Course Timings:

08:00 - 08:20	Morning Coffee / Tea
08:20 - 10:00	First Session
10:00 - 10:20	Coffee / Tea / Snacks
10:20 - 12:20	Second Session
12:20 - 13:30	Lunch Break & Prayer Break
13:30 - 15:00	Last Session