

Shutdown Planning and Management

5-Day Training Program

INTRODUCTION

The engineering world is littered with examples of poor shutdowns with massive overruns in costs and problems in resource planning.

Performing an effective shutdown is an example of applying many of the principles of good Project Management with some important exceptions, these are outlined in the workshop. This workshop gives you an excellent review of shutdown management from the perspective of someone who has done it from the trenches. There are many case studies of successful shutdown projects to ensure that you get the latest and most up to date information to successfully apply to your next project no matter what position you hold.

WORKSHOP OBJECTIVES

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

- Describe typical turnaround management techniques
- Co-ordinate a simple turnaround project from planning to execution and hand-over
- Co-ordinate the personnel in a shutdown and turnaround project
- Apply shutdown best practices and planning
- Build an effective Maintenance project plan for Shutdowns
- Use Critical paths to identify risks and manage these risk effectively
- Plan to meet deadlines and complete Turnaround projects within budget and on time
- Manage resources effectively on a turnaround project
- Develop the personal skills critical to effective Turnaround project management
- Organize and improve performance to create a productive and competent team
- Evaluate and make immediate use of Turnaround Project Management Software packages

WHO SHOULD ATTEND

- Project Engineers
- Engineering professionals
- Shutdown Managers and Coordinators
- Maintenance Planning Managers
- Cost control staff
- Construction Superintendents



- Technical personnel
- Maintenance/supervisory managers
- Project team members in: manufacturing, process industries, research & development, utilities, local authorities

PROGRAM

DAY ONE

Fundamentals of Shutdowns and Turnarounds

- Overview and Introduction
- Structure of Shutdown plan
- Critical Ingredients of Good Shutdown Management
- Typical Problems
- Co-ordination Issues
- Success Stories
- Not so successful stories

Planning and Scheduling

- Management Plan and Procedures
- Scheduling Maintenance Activities
- Monitoring and Control Techniques
- Backlog Management Techniques
- Planning for the shutdown
 - o People
 - o Materials
 - o Work Permits and Isolation
- The actual shutdown
 - o Implementation
 - o Test and Acceptance
 - o Variations to Contract
 - o Progress reviews and deadlines
 - o Tracking of work
 - o Controlling time and costs
- Post Shutdown
 - o Reporting Systems
 - o Review of reports

- o Audit of work done
- o Punchlists

Maintenance Concepts

- Measurement and Improvement of Maintenance Performance
- Maintenance Audits

DAY TWO

Human Resources

- Management of contractors and incentives
- Management of claims
- Variations to claims
- Liaison between teams
- Organisational Charts
- Motivation and Team Building
- Training of contractors
- Quality Control of Human resources

Materials & Equipment Planning

- Definition of Equipment and materials
- Interfaces between different equipment packages
- Long Lead times
- Off site construction and suppliers
- Variations to scope

Principles of Engineering Project Management for Shutdowns

- Overview of the Project Environment
- Project Life Cycle and Phases
- Project Organisations
- Project Definitions
- Case Study: An exercise in developing a work breakdown structure

Time Management of Shutdowns

- Critical Path Method of Schedule Analysis
- Precedence Method of Schedule Analysis
- Presentation of the Schedules

- Resource Analysis
- Monitoring and Reporting achieved progress
- selection of software
- case study – application of the precedence method analysis technique

DAY THREE

Cost Management of Shutdowns

- Cost Estimation
- Budget Preparation
- Financial Control
- Change Control
- Cost Reporting
- Value Management
- Case Study – Preparation of a Project cost Report

Risk Management of Shutdowns

- Risk Management Defined
- Risk Identification
- Risk Analysis
- Risk management Responses

Quality in Shutdown Management

- Definition of Quality and Management
- Quality Program
- Project Quality Assurance
- Quality Procedures
- ISO 9000

Introduction to Contract Law on Shutdowns

- Legal System
- Essential Elements of Contracts
- Factors destroying the legal force of contracts
- Termination of contracts
- Breach of Contracts
- Liquidated Damages



- Techniques to ensure completion of Shutdown Contracts without “going legal”

DAY FOUR

Project Planning Session

- Work in teams to develop and document an outline Project Plan for a defined Shutdown Project

Case Studies

- Manufacturing Plant
- Offshore Platform
- Oil Refinery
- Power Plant

DAY FIVE

Conclusion

- After the Shutdown – continuous improvement
- Elimination of problems and bottlenecks
- Planning the Next Shutdown – retaining data
- Summary, Open Forum & Closing