

# Professional Engineering Services

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## Managing Efficient Shutdown and Turnaround

**Course Duration**                      5 Days

### **Course Contents:**

#### **Part I:**

##### **Introduction to Shutdown & Turnarounds:**

- Introduction
- The Turnaround in a Business Context
- Cost of the Event
- Drain of Resources
- Hazard to Plant Reliability
- Strategy
- Turnaround Philosophy
- Financial Concerns
- Current Performance
- Plant Turnaround History
- Corporate knowledge
- Project and maintenance Work Scope
- Organization
- An Engineering Perspective
- Integration
- The Phases of a Turnaround:
  - Initiation Phase
  - Preparation Phase
  - Execution Phase
  - Termination Phase
- Conclusion and discussion.

#### **Part I:**

##### **Phase One: Initiating the Turnaround:**

- Initiating the Turnaround
- The Steering Group
- Organisation ,Roles and Turnaround Leadership
- The Purpose of the Steering Group
- The Methodology
- Key Event Program
- Turnaround Preparation Program
- The Turnaround Manager
- Leadership Style
- Selecting the turnaround management (The Preparation Team)
- Shutdown Planning/Preparation Team

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- Preparation Coordinator
- Planning Coordinator
- Planning Team
- Logistic Coordinator and Logistic Team
- Gathering Basic Data:
- Personal Contacts
  - ✚ Formal Meetings
  - ✚ Documentation
  - ✚ The Critical Path Method:
- The Greenfield Plant Shutdown
- Workshop Using MS-Project
- Skills Practice Exercise
- Short-Cut Approach to Planning

### **Part III:**

#### **Phase Two: Preparation of the Turnaround:**

- Validating The Scope of Work
- Pre-shutdown Work
- Contractor Management
- Types of Contracts
- The Turnaround Organization
- Planning the Turnaround
- Approaches to work Estimating
- Safety Plan
- The Quality Plan
- Effective Communication

### **Part IV:**

#### **Phase Three: Executing the Turnaround:**

- Process Shutdown and Start Up
- Preparing Plant for Maintenance Work
- Isolation of process Equipment
- Isolation of Electrical Equipment
- Removal of Hazardous Substances
- Hydro-testing Pressure Vessels

### **Part V:**

#### **Phase Four: Terminating the Turnaround:**

- Shutdown Progress Monitoring and Control:
  - ✚ Budgeting, Cost and Progress Control
  - ✚ Earned Value Analysis
  - ✚ Earned Hours Reporting
  - ✚ Key Performance Indicators(KPIs)

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- Finalization and Post-Audit
- Organizational Learning and Improvement
- Post-Audit Report
- Typical Contents of Post Audit Report
- Turnaround Performance Review
- The Greenfield Plant Turnaround
- Conclusion

