EFFECTIVE PLANT SHUTDOWN AND TURNAROUND

Green World Training & Consultancy Services
(A Unit of Green world Group of Companies)

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TRAINER OVERVIEW

Consultant on TPM, RCM, Shutdown management, project Management, Plant Reliability, Root Cause Failure analysis, Pump, compressor and Turbine maintenance and overhauling expert.

He has 17 Years of technical and engineering management experience in the largest Public Sector oil Company in India and 3years of experience in a state of the art power plant built by ABB Sweden owned by M/S Indian Charge Chromes ltd.

TRAINER EXPERIENCE

He has experience and exposure in multi disciplinary areas involving Maintenance Management, Plant Installation - Erection - Commissioning, Plant Design and Engineering, shutdown management, maintenance and reliability, asset management, advanced maintenance strategies, Project Consultancy, Project Management and coordination, Contract Management, Technical Document Management, Vendor Evaluation, Equipment Inspection, Plant Performance Evaluation, Contract Negotiation, etc.

A leader in workshops and a public speaker in various nationwide and international conferences held at Egypt, London, Canada, Germany, and South Africa Etc. He is a very motivating and enchanting personality.

BOOK PUBLISHING

Published book with Taylor and Francis ,USA on Shutdown and Turnaround management.

COURSE 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. The engineering world is littered with examples of poor shutdowns with massive overruns in costs and problems in resource planning. This workshop gives you an excellent review of shutdown management from the perspective of someone who has done it from the trenches. 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

OBJECTIVES

- At the end of this workshop participants will be able to :
- Describe typical turnaround management techniques
- Coordinate a simple turnaround project from planning to execution and hand – over
- Coordinate 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 management plan, work plans, resource plans and budget
- Develop the personal skills critical to effective Turnaround project management
- Organize and improve performance to create a productive and competent team

WHO SHOULD ATTEND?

The Course would undoubtedly be of immensevalue and interest to:

- Engineering professionals
- Maintenance planning managers
- Maintenance/supervisory managers
- 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
- Participation from inspection, materials, safety and maintenance engineering is also encouraged.

TRAINING METHODOLOGY

This workshop is a combination of dynamic instructor lead topic areas and class discussions. Interactive discussions will allow you to hear and learn best in class applications relating to shutdown and turnaround planning and execution techniques. The workshop ends in a practical application of theory in a team based case study.

ORGANIZATIONAL IMPACT

The organization will benefit from this seminar by:

- Improved motivation of employees that are now more confident about how to go about
- Planning managing their shutdowns and turnarounds
- Improved shutdown work quality and less rework
- Reduced shutdown durations due to the elimination of unnecessary work and proper
- Scheduling
- Reduced costs due to the smoothing of resource demand and improved resource utilization
- Fewer logistical delays due to improved planning and communication
- Lower risk due to formal risk management

COURSE INTRODUCTION

The Course would undoubtedly be of immensevalue and interest to:

- A greater appreciation of the key role of planning in the shutdown process
- Being able analyze, compile and communicate the initial scope and estimates with confidence
- A better understanding of how the shutdown/turnaround must support the current objectives of the organization and plan accordingly
- Being able to recognize shortcomings in the current way of planning and scheduling and being able to actively contribute to improvement
- Becoming a more valued member of the team due to improved knowledge in all aspects of shutdown and turnaround management.
- Improved self-esteem, confidence and a fresh outlook from exposure to quality training and also the opportunity to network with people from other organizations that face similar challenges

TOPIC 1

OVERVIEW OF SHUTDOWNS AND TURNAROUND MANAGEMENT

- ✓ Understanding the importance of managing shutdowns
- ✓ Effectively
- ✓ Looking at the basic approaches to shutdowns:
- ✓ Turnkey
- ✓ Loose control
- ✓ Tight control
- ✓ Outlining the differences between approaches
- ✓ Providing you with the ingredients for

TOPIC 2

DIFFERENCES BETWEEN PROJECTS AND SHUTDOWNS

- ✓ Organizing the shutdown
- ✓ Understanding the role importance of the shutdown coordinator:
- ✓ Personality traits
- ✓ Roles and responsibilities
- ✓ Shutdown organization
- ✓ Options to the shutdown organization
- ✓ Example : organization structure for a 24/7 shutdown

successful shutdowns
- ✓ Looking at management responsibility
- ✓ Identifying the various phases of shutdowns
- ✓ Identify the work
- ✓ Planning the work
- ✓ Scheduling the work
- ✓ Executing the shutdown
- ✓ Shutdown close – out

TOPIC 4

SAFETY PLAN

- ✓ Shutdown coordinator
- ✓ Engineers
- ✓ Supervision
- ✓ Workers

TOPIC 5

ISSUES TO BE ADDRESSED IN THE PLAN

- ✓ The model of excellence for Turnarounds (MOE)
- ✓ A frame work for excellence (Benchmarking against best practice)
- ✓ The various uses of the MOE (A versatile tool for improvement)
- ✓ The critical elements of the MOE (Mapping out effectiveness)
- ✓ The sub – elements of the model (Handling the fine detail)

TOPIC 7

WORK SCOPE SUPPORT PLAN

- ✓ List the eight required support plan systems
- ✓ Develop the support plan work package
- ✓ Describe the support plan systems
- ✓ The criticality of the support plan
- ✓ Shutdown planning and scheduling

TOPIC 3

QUALITY PROCESSES

- ✓ Quality control
- ✓ Quality assurance
- ✓ Quality management small projects
- ✓ Quality management large projects

TOPIC 6

SHUTDOWN WORK IDENTIFICATION

- ✓ Maintenance shutdown scope
- ✓ Categories of work
- ✓ Issue to consider
- ✓ Defining and limiting scope
- ✓ Pre-shutdown work
- ✓ Sources of shutdown work
- ✓ General shutdown checklist
- ✓ Compiling identified work
- ✓ Works order, purchase orders, permits, etc
- ✓ Final work list
- ✓ Parts, materials and equipment
- ✓ Master materials list
- ✓ Shutdown constraints – elapsed time, resources, funds
- ✓ Prioritizing the work
- ✓ Job input cut-off date
- ✓ Assignment responsibilities

TOPIC 9

PLANNING THE WORK

- ✓ Work planning flowchart
- ✓ Convert tasks to work orders
- ✓ Elapsed time and staffing
- ✓ Work packages
- ✓ Roles of operations
- ✓ Precedence networks
- ✓ What is programming
- ✓ Activity sequencing
- ✓ Creating the logic network
- ✓ Plug dates

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TOPIC 8

PLANNING THE PLAN

- ✓ Goals and objectives:
- ✓ Time
- ✓ Cost
- ✓ Quality
- ✓ Safety
- ✓ The 'hot' spot of projects
- ✓ General conflicts

TOPIC 11

THE CRITICAL PATH

- ✓ What is it and how is it used?
- ✓ The sub – critical path
- ✓ Negative floats (slack)
- ✓ Bar Charts
- ✓ How derived
- ✓ Example
- ✓ Resource Smoothing
- ✓ Resource budgeting
- ✓ Types of resources
- ✓ Resource Leveling
- ✓ Example of Resource Leveling
- ✓ Setting key events and milestones
- ✓ Shortening the critical path
- ✓ Crashing activities and shutdown
- ✓ Time/cost considerations for critical path shortening
- ✓ Schedule control

TOPIC 13

CONTRACT STATEMENT OF WORK

- The contracting/purchasing process
- Planning the contract
- Evaluation criteria
- Requesting contractor responses
- Selecting contractors
- Administering the contract
- Closing the contract

TOPIC 10

RESOURCE SCHEDULING

- ✓ Adding activity durations
- ✓ Further considerations e.g. weather
- ✓ Activity parameters – meanings and calculations
- ✓ Early start
- ✓ Early finish
- ✓ Late start
- ✓ Late finish
- ✓ Total float (slack)
- ✓ Free float (slack)

TOPIC 12

THE USE OF CONTRACTORS

- ✓ When are contractors
- ✓ The advantages and disadvantages of contractors
- ✓ Selection of contractors
- ✓ Creating contractor work packages
- ✓ Types of contracts
- ✓ Fixed price
- ✓ Cost reimbursement
- ✓ Time and material
- ✓ Unit price

TOPIC 14

NEGOTIATIONS

- ✓ What is negotiations
- ✓ The negotiation process
- ✓ Negotiation tactics

TOPIC 15

CONTRACT MANAGEMENT

- ✓ Before the event
- ✓ During the event
- ✓ After the event

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TOPIC 16

SHUTDOWN BUDGETING AND CONTROL

- ✓ What is cost and cost management?
- ✓ Cost management processes
- ✓ Cost estimating
- ✓ Cost budgeting
- ✓ Cost control
- ✓ Cost management plan
- ✓ Creating a shutdown budget Topic 20
- ✓ Included in the budget
- ✓ Excluded from the budget
- ✓ Project cost control
- ✓ Project costs
- ✓ The 'S' curve
- ✓ Earned value management (EVM)

TOPIC 18

- ✓ Managing logistics in Shutdowns
- ✓ Logistics functions during shutdown
- ✓ Duties of the logistics team
- ✓ Duties of the logistics coordinator
- ✓ Storeroom management -24/7 shutdowns
- ✓ Management of long lead time items
- ✓ The process
- ✓ Effect on milestones
- ✓ Expediting

TOPIC 20

SHUTDOWN EXECUTION

- ✓ Managing The Work Quality
- ✓ Shutdown Master Schedule
- ✓ Daily work schedule
- ✓ Emergent work
- ✓ Safety during the execution
- ✓ Job status update
- ✓ Controlling the shutdown
- ✓ Role of the shutdown coordinator in 24/7 shutdowns
- ✓ Report shutdown status
- ✓ Why shutdowns failure

TOPIC 17

- ✓ The contractor Management Plan
- ✓ Classification of contractors
- ✓ Managing the bid stage and award
- ✓ Effective mobilization
- ✓ Efficient demobilization
- ✓ Contractor Momentum
- ✓ Establishing critical path momentum
- ✓ How to motivate the contractor
- ✓ Understanding the 'S' curve

TOPIC 19

RISK MANAGEMENT

- ✓ Component of risk management
- ✓ Identification
- ✓ Quantification
- ✓ Response
- ✓ Response control
- ✓ Secondary risks
- ✓ Retained risks
- ✓ Contingency plans
- ✓ Unplanned events
- ✓ Unexpected gains
- ✓ The contingency plan

TOPIC 21

SHUTDOWN CLOSE – OUT

- ✓ Shutdown review meeting
- ✓ Project file
- ✓ Final report
- ✓ Shutdown post mortem
- ✓ Aspects to consider
- ✓ Review and analyze
- ✓ Action plan
- ✓ Next shutdown

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Event Organized by:

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