Process Plant Start-Up Commissioning And Troubleshooting

Introduction:

There is an alarming trend in industry to discount the potential contribution of the Technical/Operations function to productivity improvement, product quality and gains in market share. Principles taught in this training session will help you to understand the true nature and different techniques of problem solving and problem prevention in the operational/process environment.

Excellent Troubleshooting skills are considered a core competency for 'Best-in-Class' industrial companies. If your company's goals include minimizing downtime then this workshop is a must because it delivers rapid, safe Troubleshooting.

Who Should Attend?

- This programme is directed at those Supervisors who are involved in the operations function and who are responsible for leading and directing people to achieve and improve productivity levels

- Those faced with the challenge of actually using the various techniques of Troubleshooting and Problem Solving to reduce downtime and waste and improve run efficiencies will benefit
- The programme elements are of equal importance to Production, Maintenance Engineering and Process Engineering personnel

TRAINING METHODOLOGY:

The programme will be conducted in a facilitative style with a combination of lecture and practical exercises in the use of techniques, case studies and a high level of lively debate and sharing of ideas. Delegates will be encouraged to introduce problems of their own for discussion and analysis. Copies of all lecture materials, case studies and workbooks will be provided.

Course Objectives:

- How to become a 'Top Gun' Troubleshooter by acquiring new skills
- To develop a structured approach to Troubleshooting and Problem Solving which uses a common terminology and shared understanding
- To point the way to Continuous Improvement in the way you run your processes and make incremental efficiency gains
- To understand the difference between having a techniques manual on the bookshelf - and actually making it work
- To identify the "motivated" people who should be the champions of Troubleshooting and Problem Solving - and who should just follow
- To understand work practices which "allow" success in Troubleshooting and Problem Solving through reducing the variability of your process

Course Outline:

DAY 1 - Introduction and Preparation

- Introduction to Process Plant Start Up and Commissioning
- Organisation and Roles
- Supplementary Topics
- Cost Estimation
- Spare Parts Planning

DAY 2 - Commissioning Strategy

- Commissioning Strategy
- Mechanical Completion & Integrity Checking
- Pre-commissioning and Operational Testing
- Start-up/Initial Operation, Testing and Acceptance

DAY 3 - Process Plant and Machinery Specific Issues

- Process Plant and Machinery Commissioning
- Instrumentation and Control Systems
- Preparing and Isolating Process Plant

DAY 4 - Management, Planning and Control

- The Start Up and Commissioning Planning and Control
- A Short-cut Approaches to Planning
- Progress Monitoring and Control
- Earned Value Analysis

DAY 5 - Managing Risks during Commissioning

- Trouble Shooting and Problem Solving
- Risk Management
- Managing Safety and Quality
- Conclusion

DAY 6 - Concepts

- The nature of process problems affecting performance
- Performance defined in terms of generic variables: Speed, Quality and Cost
- Effort inputs in context - Asset based or Business Process based
- Structured approach - The Operations Process redefined
- Configuration; Operation; and Optimization
- Maturity Indexing: Planning, Control, Congruence, Empowerment
- 6 Big Losses, 7 Wastes

DAY 7 - Tools and Techniques - Practical Experience

- Interactive and Dynamic variable relationships analysis
- Techniques introduction
- Tools introduction
- Problem Analysis
- Practical Use of Tools and Techniques
- Case Studies
- Tools & Techniques - selecting the right one

DAY 8 - People Issues

- Working practices - empowerment or impairment?
- Group dynamics
- Individual motivators
- Developing Troubleshooting and Problem Solving skills
- Managing change

DAY 9 - Operator, Maintainer, Designer Interface

- Cross functional and Team working
- Introduction to the Theory of Inventive Problem Solving
- Auditing your process to a dynamic standard
- Effect of Maintenance/Operations strategy
- Development of Standards and Key Performance Indicators

- Life Cycle Costing, Design for Operation, Design for Maintenance

DAY 10 - Open Forum

- Revisit Concepts, Tools and Techniques
- Your Problems - Case Studies
- Your Action Plan
- Wrap up