

# € TRAINING

Process Plant Start-up with Commissioning  
and Troubleshooting

A group of four smiling professionals (two men and two women) in a meeting. The woman in the foreground is wearing a black top and a multi-strand necklace. The others are wearing white shirts. They are sitting around a table with papers and a laptop.

12 - 23 August 2024  
Barcelona (Spain)



# Process Plant Start-up with Commissioning and Troubleshooting

REF: C691 DATE: 12 - 23 August 2024 Venue: Barcelona (Spain) - Fee: 10450 Euro

## Introduction:

This conference is designed to equip participants with comprehensive knowledge and skills essential for process plant start-up, commissioning, and troubleshooting. Through it, participants will learn effective strategies and methodologies to ensure efficient and safe operations in various industrial settings.

## Conference Objectives:

At the end of this conference, participants will be able to:

- Become a 'Top Gun' Troubleshooter by acquiring new skills.
- Develop a structured approach to Troubleshooting and Problem Solving which uses a common terminology and shared understanding.
- Point the way to Continuous Improvement in the way they run their processes and make incremental efficiency gains.
- Understand the difference between having a techniques manual on the bookshelf - and making it work.
- Identify the "motivated" people who should be the champions of Troubleshooting and Problem Solving - and who should just follow.
- Understand work practices which "allow" success in Troubleshooting and Problem Solving through reducing the variability of your process.

## Targeted Audience:

- General Managers who have oversight responsibility for Plant Start-up and Commissioning.
- Operations and Maintenance Managers with direct line responsibility as well as staff support responsibility for delivering on effective Plant Start-up and Commissioning.
- Plant Start-up and Commissioning Managers and Engineers.
- Technical personnel involved in supporting Plant Start-up and Commissioning activities.
- Supervisors and Engineers, both operations and maintenance who are involved or likely to be involved in Plant Start-up and Commissioning situations.
- Production, Maintenance Engineering, and Process Engineering personnel.

## Conference Outlines:

## Unit 1:

### Introduction and Preparation:

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

## Unit 2:

### Commissioning Strategy:

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

## Unit 3:

### Process Plant and Machinery Specific Issues:

- Process Plant and Machinery Commissioning.
- Instrumentation and Control Systems.
- Approaches for Preparing and Isolating Process Plant.

## Unit 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.

## Unit 5:

### Managing Risks during Commissioning:

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

## Unit 6:

### Concepts:

- The nature of process problems affecting performance.
- Performance defined in terms of generic variables: Speed, Quality and Cost.
- Effort inputs in the 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.

## Unit 7:

### Tools and Techniques:

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

## Unit 8:

## People Issues:

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

## Unit 9:

### Operator, Maintainer, Designer Interface:

- Cross-functional and Teamworking.
- 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.
- Revisit Concepts, Tools, and Techniques.

## Unit 10:

### Case Studies and Real-World Applications:

- Real-World Case Studies: Review of successful process plant start-up and commissioning projects.
- Lessons Learned: Analysis of challenges faced and solutions implemented in various projects.
- Industry Best Practices: Discussion on industry best practices and their application in real scenarios.
- Project Simulations: Simulated scenarios to apply knowledge gained and test problem-solving skills.
- Continuous Improvement: Strategies for continuous improvement and optimization post-commissioning.