

Building Operational Management Excellence

A Manager is a person who guides and changes their business organization into one that helps achieve the strategic business goals of their organization.

Introduction

The success of every company depends of each employee's understanding of the key business components. Employee training and development will unlock the companies' profitability and reliability. When people, processes and technology work together as a team developing practical solutions, companies can maximize profitability and assets in a sustainable manner. Training and development is an investment in future success - give yourself and your employees the keys to success

It is strategically important that your operations managers understand the fundamentals of process unit operations concepts. This is the difference between being in the best quartile of operational ability and being in the last quartile. There is vast difference in the operational ability of operating companies and most benchmarking studies have confirmed this gap in operational abilities.

The unit on stream time is an indication of operations training. A first quartile-operating unit's on stream factor is greater than 97%. If the on stream factor is below 97% a review of operation training and development is warranted. If on stream factor or average years of operating experience is declining a review of operations training and development should be considered.

Whether you have a team of new or seasoned managers, an introduction or review of these concepts is very beneficial in closing the gap if you are not in the best quartile, or maintaining a leadership position. Most studies show that a continuous reinforcement of best practices in operational principles is the most effective way to obtain the desired results. Training and learning should be an on going continuous life long goal.

Course Objective

This course will guide the participates to develop key concepts and techniques to manage key fundamental unit operation systems. These key concepts can be utilized to make operating decisions that can improve your unit's performance.

Many aspects of operations can be improved including, product recoveries, purities and energy utilization, and safety. This cannot be achieved without first an understanding of basic fundamental principles of design and operation. These principles need to be understood in advance of operating and trouble shooting a process unit operation for the operator or problem solving to be effective.

This seminar focuses on the core building blocks of the process unit management. The program will emphasize process unit equipment fundamentals, safe utilization of these fundamentals by operations and maintenance personnel, and equipment troubleshooting techniques.

Unit Operations sectors covered include;

- 1) Furnaces,
- 2) Boilers and Steam Systems,
- 3) Steam Turbines, Pumps, and Compressors,
- 4) Distillation,
- 6) Piping and Heat Exchangers,
- 7) Process Control Systems,
- 8) Electrical Systems,
- 9) Catalyst and Molecular Sieve Systems,
- 10) Cooling Water Systems and Treatment,
- 11) Process Utilities
- 12) Relief Valve and Flare Systems.

What You Can Expect To Gain;

- Technical Math and Science Skills
- The Process Unit Equipment Fundamentals
- Safety Hazard Analysis
- Team Building
- Process Economics
- Environmental Management
- Process Energy Management
- Department Management Planning
- Leading and Managing Change
- Quality Assurance

Course Syllabus

This suggested course is four to six weeks. The goal of the course would be to refresh the knowledge of those who have a basic understanding of process operations management and to build a foundation to those who are new to process operations management.

Typical Course Outline

1. Overview of the Processing Industry – 1 Day

2. Technical Math - 1 Day

Goal – To be able to solve normal operational math issues

What you will Get – Short cut methods to solve normal operations issues

3. Technical Process Chemistry – 1 Day

Goal – To be able to recognize normal process chemistry names and understand their safety implications

What you will get – An overview of technical chemistry and safety

4. Technical Report Writing – 1 Day

Goal - To be able to read and write Job Work Instructions (JWI)

What you will get – Outlines and examples of effective JWI's and class exercises to learn to produce effective JWI's

5. Introduction to the Fundamentals of Unit Operations - 5 to 10 Days

Goal – To understand the basis fundamentals of process unit operations

What you will get – An overview of each of the process unit operations with emphasis on safety, commissioning, operation and maintenance.

- 1) Furnaces,
- 2) Boilers and Steam Systems,
- 3) Steam Turbines, Pumps, and Compressors,
- 4) Distillation,
- 6) Piping and Heat Exchangers,
- 7) Process Control Systems,
- 8) Electrical Systems,
- 9) Catalyst and Molecular Sieve Systems,
- 10) Cooling Water Systems and Treatment,
- 11) Waste Water Treatment and Process Utilities
- 12) Relief Valve and Flare Systems.

6. Safety Training – 2 to 3 Days

Goal – To develop each person as an independent safety monitor – instead of a few dedicated safety personnel, each employee is a safe employee.

What you will get – An overview of safety incidents that has occurred in the past and techniques to prevent future incidents, with an emphasis on Root Cause Analysis and Process Safety Management Systems.

- A. Hazard Analysis
- B. Root Cause Analysis
- C. Incident Investigation
- D. Process Safety Management Systems

7. Team Building – 1 to 3 Days

Goal – To develop guidelines for working together in team environments.

What you will get – Techniques for working with individuals and building a functioning team

- A. Working in a Team
- B. Building a functioning Team
- C. Leading a Team

8. Process Economics - 1 to 4 Days

Goal – Introduction to economics while increasing the understanding of how process units can become more profitable.

What you will get – Techniques for developing key performance levers and tools to improve business performance and manage assets in a sustainable manner.

9. Process Energy Management - 1 – 4 Days

Goal – Introduction to the fundamentals and economics of energy systems, while developing methodologies to assess and optimize energy management

What you will get – Specific opportunities to improve energy efficiency and ways to establish or improve an on going energy management program, including unit monitoring and benchmarking

10. Environmental Management – 1 –2 Days

Goal - Introduction to the key concept of management of assets for long-term environmental sustainability.

What you will get – How to develop process industries that can maintain the environmental surroundings during construction and operation of process units.

11. Introduction to Project Management - 2- 5 Days

Goal – Introduction to the fundamentals of project management. At some point almost every person in the process industry will be involved in a project. The primary goal of a project manager and the project team is to finish the project as specified, on schedule and within budget.

What you will get – How to develop the keys of project management - plan, organize, and control - This applies to virtually every activity on the project - starting with the kick off meeting and extending to all engineering, procurement and construction activities.

12. Department Management Planning – 2-5 Days

Goal – Introduction to the key concepts of departmental planning and human resources management

What you will get – keys to help set up effective department management and to plan departmental schedules

11. Leading and Managing Change – 1-2 Days

Goal – Introduction of the dimensions of change and organization transition. All first quartile plants are implementing changes to improve.

What you will get – Determine how to make successful changes to your process plant and operation, develop proper change management and strategies.

13. Quality Assurance and Improvements - 1 to 2 Days

Goal – Introduction of the key concept of continuous quality improvements.

What you will get – Statistical Process Control tools to help manage and improve process operations

Who Should Attend:

- People who are making day to day decisions regarding operation, design, and economics of processing plants;
 1. Operation Supervisors,
 2. Maintenance Supervisors,
 3. Senior Plant Supervisors,
 4. Operations Engineers
 5. Process Support Engineers,
 6. Design Engineers,
 7. Cost Engineers,
 8. Process Industry Managers.

- Ideal for veterans and those with only a few years of experience who want to review or broaden their understanding in Processing Plant Operations.

Other professionals who desire a better understanding of subject