

EFFECTIVE PRODUCTION PLANT OPERATIONS & OPTIMIZATION- BEST PRACTICES

This training course will feature:

- Process Overall Plant Effectiveness (OPE)
- Best Practices in Operation and Maintenance
- Business Sustainability and Related Factors
- Energy Conservation Opportunities
- Strategies for Improving Plant Profitability

What are the Goals?

By the end of this training course, participants will be able to:

- Recognize and understand overall plant effectiveness (OPE)
- Apply the business focus to ensure sustainable plant profitability
- Appraise the most cost-effective operation and energy saving methods
- Describe the managerial tools needed to effectively optimize plant operations
- Implement the most appropriate operation and maintenance strategies
- Determine and measure Key Performance Indicators (KPIs) for their plant
- Identify and apply effective procedures to improve those KPIs

Who is this Training Course for?

This training course will benefit all levels of personnel in a process plant environment. It will enable them to understand the design considerations, construction details and operational parameters associated with process heat exchangers.

This training course is suitable to a wide range of process plant professionals but will greatly benefit:

- Process Plant Supervisors
- Plant Engineers and Operators
- Production and Operation Engineers
- Maintenance Engineers and Technicians
- Engineering and Technical personnel involved in improving process plant, petrochemical plant and refinery profitability and energy efficiency

How will this Training Course be Presented?

This training course will utilise a variety of proven adult training techniques to ensure maximum understanding, comprehension and retention of the information presented; this includes PowerPoint presentation.

The goals of each participant are discussed to ensure their needs are fulfilled, as far as possible. Questions are encouraged throughout, particularly at the daily wrap up sessions. This provides opportunities for participants to discuss specific issues and, if possible, find appropriate solutions.

The Course Content

Day One: Appreciation of Process Plant Effectiveness

- The Concept of Overall Plant Effectiveness (OPE)
- Constraints in Optimization Operation, Economy and Environment
- Relationship Between Business and Plant Effectiveness
- Effects of Equipment Failures on Business
- Impacts of Operation and Maintenance on Plant Effectiveness
- Determination of Process Plant Availability
- Practical Case Study

Day Two: Process Plant Reliability and Improvement Techniques

- Process Plant Reliability (PPR) and Effectiveness (PPE)
- Calculation of Process Plant Reliability
- Determination of Process Plant Effectiveness
- Parameters Influence Plant Reliability
- Parameters Influence Plant Effectiveness
- Plant Reliability and Effectiveness Improvement Methods
- Case Study

Day Three: Energy Savings Opportunities and Strategies

- Energy Use in Process Plant and Petrochemical Industry
- Best Practices in Process Plant Energy Management
- Heat Integration Methods
- Pinch Method and Improvement Procedure
- Thermal Power Plants Energy Saving Options
- Obstacles for Energy Management Programs
- Case Study

Day Four: Monitoring and Failure Prevention Methods

- Methods for Minimizing Static Equipment Failure
- Strategies for Mitigating Rotating Equipment Down Time
- Condition Monitoring Methods
- None Destructive Examination (NDE) Techniques
- Determination of Equipment Life Time and Remaining Life
- Methods for Extending Equipment Cycle and Service Time
- Detailed Case Study

Day Five: Best Practices in Operation & Maintenance Methods

- Cost-effective Operation and Maintenance Strategies
 - Piping System, Tanks and Pressure Vessels
 - Heat Exchangers, Boilers and Cooling Towers
 - Turbomachinery: Pumps and Compressors
 - Project and Spare Parts Management and Budgeting
 - Practical Case Study
 - Summary and Course Closure
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