Production Quality & Process Troubleshooting

Course Duration : 5 days

Summary:

This course aims to give participants a comprehensive understanding of production quality management and develop their skills for effective troubleshooting in manufacturing processes. It focuses on practical applications and real-world scenarios to improve participants' ability to address and resolve production challenges.

Objective:

- Gain an in-depth knowledge of production and quality management.
- Explain the theory behind operational skills and techniques for quality control.
- Discuss various aspects of oil and gas process operations, including pressure, temperature, flow, level, pipes, insulation, valves, solenoids, actuators, prime movers, pumps, strainers, and compressors.
- Understand logic in operating procedures and sequences of steps.
- Recognize different types of storage facilities, heat transfer equipment, process support equipment, and process and instrument drawings.
- Diagnose operating problems and optimize the use of chemicals and blending processes.
- Carry out the startup, shutdown, and monitoring of a process system in accordance with internationally recognized standards.
- Implement health and safety procedures and manage emergencies and critical situations in the workplace.
- Develop skills in identifying and analyzing production issues.
- Acquire hands-on experience in troubleshooting manufacturing processes.
- Explore strategies for continuous improvement and staying abreast of industry trends.

Contents:

Introduction to Production Quality Management

- Understanding the Significance of Production Quality
- Essential Elements of Quality Assurance in Manufacturing
- Regulatory Standards and Compliance
- Overview of Production Processes
- Introduction to Troubleshooting Methodologies

Quality Control Techniques and Tools

- Principles of Statistical Process Control (SPC)
- Six Sigma Methodology for Quality Improvement
- Root Cause Analysis (RCA) Techniques
- Process Mapping and Flowcharting
- Hands-on Exercises in Quality Control

Identifying and Analyzing Production Issues

- Common Production Quality Challenges
- Failure Modes and Effects Analysis (FMEA)
- Case Studies on Process Failures
- Quality Monitoring Systems and Sensors
- Group Discussions on Real-World Scenarios

Troubleshooting in Manufacturing Processes (Day 4)

- Step-by-Step Troubleshooting Procedures
- Analyzing Production Data for Anomalies
- Strategies for Reducing Process Variability
- Technology Solutions for Troubleshooting
- Practical Workshop on Troubleshooting Exercises

Continuous Improvement and Future Trends

- Implementing Continuous Improvement Practices

- Lean Manufacturing Principles
- Emerging Technologies in Quality Management
- Predictive Maintenance for Process Optimization

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