ASSET PERFORMANCE MANAGEMENT

METHODS FAILURE MODE, EFFECTS AND CRITICALITY ANALYSIS

This interactive, practical course will provide guidance on performing a machinery Failure Mode, Effects and Criticality Analysis (FMECA) from start to finish including failure mode identification, effects assignment and pre/post risk mitigation criticality judgement. Many of the exercises in this class are performed in groups of 4-5 minimum on a white board or paper. Each group will find a volunteer facilitator that will be responsible for leading the discussion. Facilitator skills and ground rules will be established.

Format

Duration: 15 hours **Schedule:** 2 Day(s) **Delivery:** Classroom

Who should attend

Those who want to:

- Learn a tried and tested technique for failure mode identification and mitigating action justification
- You are looking to get your team started and reliability programs ramped up using a key reliability improvement tool
- Use this simple approach across maintenance but also apply it for machinery, process and design validation
- Experiencing recurring problems and/or lack of confidence in current solutions
- Continually under-performing due to current design not meeting business goals
- Job roles: Graduate Engineers, Project Engineers, Asset Managers, Maintenance Engineers, Design Engineers, Reliability Engineers/Technicians, Operators, Safety Engineers, Risk Engineers, Defect Elimination Managers

Objectives

- The objective of this course is to interactively teach participants how to conduct and facilitate their own maintenance FMECA's.
- The participants will explore the key elements of both FMEA's and FMECA's, and practice conducting their own analysis using the core facilitation skills.
- Many of the exercises will be performed in groups of 4-5 minimum on a white board or paper. Each group will find a volunteer facilitator that will be responsible for leading the discussion. Facilitator skills and ground rules will be established.

Program Outline

Day 1

- Introduction to FMEA/FMECA
- Setting Up For FMECA
- The FMECA Process
- Create the Block diagram

- Constructing the hierarchy
- Functions
- Functional Failures
- Failure Mode and Causes
- Group exercise

Day 2

- Failure Severities / Effects
- Criticality Ranking
- Mitigating tasks
- Post Mitigation Criticality
- Report
- Group exercise
- Evolving from FMECA to RCM
- Summary – Process, Potential Barriers, Success Factors

Next Steps:

- RCM201 - Maintenance Strategy Development
- RBD101 - Improving Plant Availability using Reliability Block Diagrams

Languages

- English
- Spanish