Process Failure Modes and Effects Analysis – Process FMEA

Target Audience

Manufacturing and Quality Personnel with responsibility to complete Process Failure Mode and Effects Analysis (PFMEA)

Course Description

Participants will learn how to increase the value of Process FMEA. Using a cross-functional team approach, students will use the SAE/AIAG reference manuals to develop PFMEA's that identify high-risk areas and mitigate risks to minimize Process errors.

Prerequisites

Students should be familiar with basic FMEA concepts as described in the AIAG or SAE J1739 Potential Failure Modes and Effects Analysis Handbook.

Course Objectives

- Introduction
  - An overview of Process FMEA – Definition, Purpose, Outputs, Difficulties in applying PFMEA
- The FMEA Form
  - FMEA Header
  - FMEA Body
- Process Flow Diagrams
- Items, Process Functions, and Performance Requirements
- Understanding the relationship between Failure Modes, Effects, and Causes
- Process Controls – Prevention vs Detection
- The relationship between Prevention on Occurrence
- Consistency in ranking Severity, Occurrence, and Detection
- Assessing Risk:
  - Safety and Government Regulations
  - The RPN
  - Assigning effective recommended actions
  - Logging lessons learned
  - Evaluation of Effectiveness
- The Risk Reduction Process
  - Team Membership
  - Meeting Preparation
  - Managing Recommended Actions
  - Reporting on progress
  - Showing continuous improvement – PFMEA as a Living Document

Course Length

8 Hours

Hardware/Software Needs

None

Instructional Techniques

- Lecture
- Individual Exercises
- Team Exercises
- Class Discussion
- Individual Self-Tests

Process Evaluation

Post Testing

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