

AUTOMOTIVE CORE TOOLS TRAINING (APQP, PPAP, FMEA, SPC & MSA)

Course Objectives:

This course will provide participants with an understanding of the concepts and application of the automotive core tools of APQP, PPAP, FMEA, SPC & MSA in the IATF 16949 quality management system context. Practical exercises will be provided during the training to accelerate the positive learning outcomes for the participants.

Course Contents:

- Overview of APQP and PPAP
 - Introduction to APQP
 - 5 phases of APQP and their intended outputs
 - Introduction to PPAP
 - PPAP and its submission requirements

- Failure Mode & Effect Analysis (FMEA)
 - Design FMEA Requirements
 - Process FMEA Requirements
 - FMEA Sequence
 - PFMEA Preparation
 - Process Flow Advantages
 - Potential Failure Mode
 - Potential Effects
 - Severity Evaluation
 - Failure Mode Classification
 - Potential Causes
 - Current Detection Control
 - Risk Evaluation – RPN
 - Recommended Action
 - Action Evaluation
 - FMEA Forms Type
 - FMEA Checklist

- Statistical Process Control (SPC)
 - Process Variation
 - Process Control System
 - Variation common and special causes

- Process Control and Capability
- Control Chart Type and Application
- Process Control Chart
- Control Chart Preparation
- Xbar-R Chart
- X-MR Chart
- P Chart
- Ca, Cp, CpK Pp, Ppk Index
- Process Capability (PpK & CpK)

- Measurement System Analysis (MSA)
 - Measurement Process
 - Measurement System Characteristic
 - Measurement System Variation Sources
 - MSA Preparation
 - MSA Method
 - Attribute Data MSA
 - GR&R Analysis
 - Bias Analysis
 - Variable Data MSA
 - Risk Analysis
 - Current Detection Control

- Revision - Discussion and Clarifications

Who Should Attend:

This training is designed for Internal Auditors, Management Representatives, ISO 9001 and IATF 16949 Implementation Teams and anyone who wish to know the introduction and application of the core tools of APQP, PPAP, FMEA, SPC and MSA under IATF 16949.

Training Methodology:

Training comprises of tutorials, interactive sessions, exercises, case studies, group discussions, participant's presentation and Q&A session.

Award of Certificate:

Participants will be issued with a Certificate of Successful Completion upon meeting 75% of the required course attendance.



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Duration:

3 days (21 hours)

Course Fee:

\$750 nett per trainee (GST is not applicable).

(Course fee is inclusive of all training materials and light refreshments.)