

RELIABILITY TOOLS AND INTEGRATION FOR THE MANUFACTURING PHASE

OBJECTIVES

This course will look at reliability tools that are used in the manufacturing phase of a project. The tools used in manufacturing are a combination of analytical and test techniques to continually assess the reliability of the product. The focus here will be mostly at finding process issues.

WHO SHOULD ATTEND

This course is intended for manufacturing and test engineers and reliability engineers involved in the manufacturing of a product and the collection of field data.

OUTLINE

- **Elements of a Reliability Program**
 - Basic Definitions
 - Reliability vs. Cost
 - Product Life Cycle Matrix
 - Integration Phases
 - Integration in the Concept Phase
 - Integration in the Design Phase
 - Integration in the Prototype Phase
 - Integration in the Manufacturing Phase
- **Integration in the Manufacturing Phase**
 - Highly Accelerated Stress Screening (HASS)
 - Setting up a HASS based on HALT results
 - Running Proof-of-Screen
 - Using RDT and FMECA results to identify possible wearout mechanisms that need to be taken into account for HASS
 - Using Reliability Prediction results to help determine how much screening is necessary

- On-Going Reliability Testing (ORT)
 - What is an ORT
 - How to set up an ORT
 - Different variables
 - Comparing ORT to HASS
 - How to use the results of a prediction when Setting up an ORT
- Repair Depot Setup
 - Key factors involved in setting up a repair depot
 - Sending NTF hardware back through HASS
- Field Failure Tracking System
 - Purpose of a field failure tracking system
 - Linking field failure information with predictions
 - Using failure analysis tools with field trends
- Reliability Performance Reporting
 - How to set up
 - What metrics to track
 - Comparing results with Reliability Program and Integration Plan
- End-of-Life Assessment
 - Gathering and plotting data
 - Comparing with predicted results
 - How to use the results of reliability predictions and FMECA's to assist in EOL assessment
- **Summary**
 - Reliability vs. Cost
 - Summary of Phases
 - Summary Tools within this Phase
 - Benefits of Integration
 - Next Steps
 - Implementation
 - Further Education in Integration
 - Related courses by Ops A La Carte
 - Contact Information