Manufacturing Technology Training
An IMTMA initiative

Online Training Programme on Reliability Engineering - Concept, calculations ,techniques and tools
Date : 7 to 14 December, 2020
Time : 1400 Hrs to 1700 Hrs (Online Mode)

INTRODUCTION

Every organization today strives to ensure that customer expectations for reliability are fully met throughout the life of the product with low overall life-cycle costs. This means that a company must have a systematic, streamlined, engineering process in which reliability engineering is weaved into the total development cycle of the product design process.

By the day, products are getting more complex. With increase in complexity in all aspects of product development, it becomes a necessity to have a well-defined process for incorporating reliability activities at every stage of the design cycle. By implementing reliability, a company can save potential field failures, and in turn save unwanted warranty costs. A reliable product in the market always ensures highest customer satisfaction.

Keeping this in mind, IMTMA is organizing a 5 day online technical training program in Reliability engineering.

The program dates are **Dec 7, 8, 9, 10 and Dec 14, 2020.**

FOCUS AREAS

- Importance of reliability / availability / maintainability
- Definition of Reliability, Risk with few examples
- Definition of Function, Failure & different types failures with examples
- Concept of probability in Reliability & Failure
- Recap of statistics & probability
- Use of basic statistics in the expression of metrics of Reliability & Examples
- Product life, Bath Tub Concept application during product life
- Estimation of reliability of components & in different types systems
- Probability Density function Failure rate in the stages of Bath Tub Curve
- Exponential / Normal and Weibull distribution methods & Weibull plotting for LDA
- Definition & estimation of MTTF, MTTR, MTBF to be used as metrics for Reliability
- Tools and techniques for reliability enhancement during design
- Concepts of FTA / RBD Boolean Truth table
- The necessity for experiments & the reason for accelerated testing in lab and the models to relate the lab data to the Product population
- Availability calculations for serial and parallel systems
- How to use the reliability data to make the product guarantee & warranty

KEY TAKE AWAYS

- Understand the basics of Reliability engineering
- Understand the meaning of Function, reliability, failure and types of functional failures.
- Understand and apply the different methods of Reliability Prediction for both Electronics & Mechanical Systems
- Calculate Failure rates & MTBF
- Understand various Lifetime Distributions & to perform Life Data Analysis
- Understand about the basics of Maintainability & Availability

FEE PER PARTICIPANT (PER LOGIN)

Rs. 9000/-
+18% GST

IMTMA Members/ Micro Companies/ Individuals/ Educational Institutions / Students/ IMTMA Non Members/ Others

FACULTY

The program shall be delivered by Mr Sivanarul Selvan.

Mr Sivanarul Selvan P, is a specialist consultant and Instructor in RAMS (commonly referred to as Reliability, Availability, Maintainability, and Safety), has a total of 30 years of professional experience, who worked with several Multinational Companies and is an entrepreneur. He is an Instrumentation & Control Engineer with CAD/CAM/CAE & Programming knowledge. He is practising RAMS for the last 15 years, and executed many Training Programs and Consultancy assignments to various Industrial verticals. He is specializes in RAMS, Reliability TEST methods & Plans, HALT, HASS & ALT, Physics of the failure, Design of Experiments, LEAN – Six Sigma.

For Registration Contact

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REGISTRATION : Prior registration with an online advance payment is must. Number of participants is limited and will be accepted on 'First Come First Serve' basis. A Certificate of participation will be issued to participants.