



Measurement System Analysis (MSA)

Two Days Executive Programme

It is often stated, "What you Value- you Measure", and to measure the same, you must have a Measurement System. The modern day business measurement metrics emphasize on performance measurements such as ROI, Profitability, Lead Time, etc. These measurement metrics make it imperative for the organization to have a reliable and consistent Measurement System in place.

All Measurement Systems are directed at monitoring and controlling variation. That is, emphasis must be placed on learning how the measurement system interacts with the environment so that only data of acceptable quality are generated. An appropriate statistical study (R&R, Bias, Linearity and Stability) has to be conducted in each type of measuring and test equipment system. Software on Measurement System Analysis was developed with the following objectives:

- (a) To quantify the variation present in the measurement system
- (b) To ensure the stability of the measurement system
- (c) To initiate appropriate actions

Programme Objectives

The above Training provides a complete insight into:

- Creating an awareness about MSA in your organization
- Training and Developing the Quality Professionals/ Executives to validate their measurement systems
- Assisting the Executives to analyze the result of the MSA & helping them to further drill down to the causes of variation
- Developing the team to comply to the TS16949:2002 Standard requirements

The Programme is Beneficial to

- Companies who need Data Analysis for their Business process
- Companies who have Measurement Systems to Control & Monitor their processes
- Companies who are applying to TS16949:2002 Certifications or are TS16949:2002 Certified
- Companies who have adopted Process Quality Improvement tools in their business

Programme Contents

Following are the contents of the Training Session:

1. What is MSA?
2. Purpose & Origin of MSA
3. Data & Data Types
4. Uses of Measurement Data in Manufacturing
 - Process Decisions
 - Quality of Measurement Data
 - Product Decisions
 - Metrics for Quality of Measurement Data
5. Terminology
6. Measurement System Study
7. Measurement System Variation
 - Sources of Variation
 - Effect of Measurement System Variability
 - Product Control Philosophy vs Process Control Philosophy
 - Effects on Product Decision
 - Fishbone
 - Effects on Process Decision
8. Components of Measurement Systems Variation
 - Location Variation
 - System Variation
 - Width Variation
9. General Concepts of Assessing Measurement Systems
 - Measurement Systems Study: Steps
10. Recommended Practices
11. Measurement System Stability Analysis
12. Measurement System Bias Analysis
13. Measurement System Linearity Analysis
14. Measurement System Gage R&R Continuous Analysis
15. Attribute Measurement System Analysis

Benefits of MSA

- Simplifies the tedious and time consuming calculations and provides instant and accurate data through usage of Advanced Statistical software
- On-line guidance to the users to know the steps of MSA
- Helps to judge the compatibility of the measurement system for the given measurement process
- Reduces the contamination of measurement variation in the total process variation
- Triggers and suggest action plan based on the final result

For further details please contact:

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Business Excellence Enablers



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