



SE MSA

Measurement Systems Analysis

Ensure Quality and Reliability to Your Measurement System

Overview

Measurement systems distinguish one part from another. Measurement systems analysis evaluates if a measurement system is suitable for a specific application. The inherent variability of the measurement system, when used to measure the process, is compared with the process variation. This comparison illustrates how much of the actual part-to-part variation is reported and how much of it is overshadowed by the measurement system's own variation. Measurement system analysis helps reduce two types of risks associated with the measurement of a process and making decisions — the risk of false alarm and the risk of missed opportunities.

SE Measurement Systems Analysis, or MSA, evaluates the entire measurement process for two primary reasons. First, to ensure the integrity of data used for analysis, most often quality analysis. And, second, to understand the implications of measurement error when making decisions concerning a product or process.

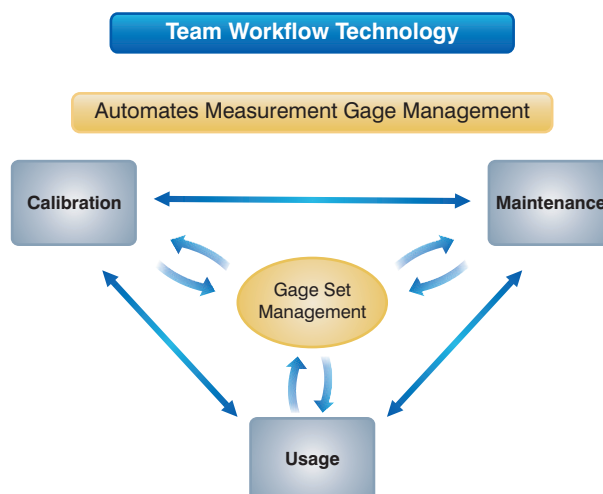
SE MSA allows you to guarantee how the measurement system variation can be resolved into components or causes of

variation. Each component has to be isolated and quantified. Only then, can you start looking for means of reducing the contribution of each error component. SE MSA classifies variations into the following categories: Bias, Repeatability & Reproducibility, Linearity, Stability and ANOVA.

The software uses Team Workflow - a powerful mechanism which ensures all established inspection activities and deadlines are met. It works by automatically notifying users, via e-mail, of pending tasks. It also authorizes the registration of all relevant information, allowing pending tasks to be done quickly. If there's any delay in completing tasks, those responsible for the inspection process will be notified.

Based on known requirements and organizational demands such as ISO 9000, ISO/TS 16949, ISO/IEC 17025, standards, SE MSA allows you to control, inspect, calibrate, and maintain the entire inventory of gauges and measurement equipment. It also ensures compliance with international quality standards, including ISO 9000, ISO/IEC 17025 and ISO/TS 16949.

Team Workflow



 **Features**



- Provides guidance for developing a formal gauge management system.
- Classifies equipment based on several criteria, such as laboratory, application, usage location, equipment type, and more.
- Demonstrates how to find root causes measurement process problems and explores basic causes to investigate.
- Easily finds any equipment by entering any known data such as tag, description, status, manufacturer, calibration interval, and more.
- Matches equipment to standard calibration procedures.
- Schedules and tracks MSA studies.
- Provides forms for collecting measurement data.
- Maintains documented procedures and instructions to perform studies.
- Defines a specific gauge in each type for a particular characteristic that needs to be analyzed.
- Provides fixed and variable calibrations.
- Documents, schedules, and performs Bias, Linearity, Stability and ANOVA Repeatability and Reproducibility studies.
- Compares the performance of equipment before and after its repair.
- Establishes acceptability of manufacturing processes.
- Completes analysis using graph charts, such as average/range, errors, normalize individuals chart, whiskers chart, scatter, histogram, linearity, and others.