

# Challenges in Test System Verification

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## Abstract

The Test Systems in manufacturing are highly complex measurement systems. The quality of the Test Systems is defined by the statistical properties of multiply measurements. If the measurement results are „close” to each other and to a known good reference value, then the quality of the test system is considered „good”. The most common reasons behind a „bad” quality measurement system can be faults, inaccuracies or their interactions with the environment, which can directly result in poor yields, false failures and quality risks. If the variation of the measurement results becomes too large, then they might even mask the variations in the manufacturing process.

The need is valid for automated or semi-automated system validation methods that can assure the quality of our measurement results. There are a number of methods used in the industry that can provide the required confidence in our measurements.

*Keywords:* measurement system, verification, Gage R&R

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