

MEASUREMENT SYSTEM ANALYSIS – RM13003

Subject Matter Interest Group

WHO WE ARE

Core Team

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- Marnie Ham (GE)
- Miriam Kuehn (MTU)
- Steve Hampton (PCC)
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Extended Team

- Geoffrey Carpentier (Safran)
- Kathleen Wissels (GE)
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- Stefan Necker (MTU)

MSA SMIG Group promotes the effective deployment of the measurement system analysis methods from RM13003 across the AESQ Supply Chain

Authors and curator for RM13003

Experts from the aerospace industry who helped develop procedures, curriculum and provide training in process control

Provider of MSA related webinars

Experts you may address questions to via the LinkedIn Measurement System Analysis Community of Practice

WHAT WE DO

Community of Practice

<https://www.linkedin.com/groups/9096447/>



AESQ Measurement Systems Analysis (MSA) (RM13003) C Private Listed



Free Webinars

<https://aesq.sae-itc.com/events>

What is an MSA?

How do a variable GRR?

Software - Minitab, Excel, JMP, ?

Computer Driven Measurement Systems

Free Reference Material

<https://aesq.sae-itc.com/supplemental-material>

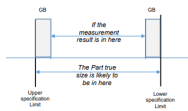


Figure 12 - Guard Bands

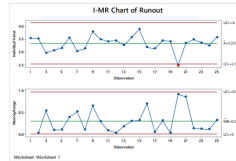


Figure 9 - Consistency Chart

WHY WE DO IT

Support the requirements of AS13100, Section 7.1.5.1.1

Enable meeting the measurement systems analysis requirements contained in AS13100, Chapters B (APQP/PPAP) and C (Defect Prevention Tools)

Provide guidance on most common MSA methods

Provide real-life examples and case studies to learn from.

Working with IAQG

Revising Manual – better flow and new content

Use QR codes above to access AESQ and MSA COP websites

Table 3 - When to apply measurement capability assessment

EVENT	EVENT DESCRIPTION	MINIMUM QUALITY CAPABILITY INDEX	MINIMUM SAMPLE SIZE	NOTES
1	New customer design or material	1.33	30	Review MSA of customer requirements
2	New supplier or change in the customer's supply base	1.33	30	Review MSA of customer requirements
3	Product is produced under new or changed conditions	1.33	30	Review MSA of customer requirements
4	Production equipment is changed	1.33	30	Review MSA of customer requirements
5	Process parameter is changed	1.33	30	Review MSA of customer requirements
6	Process control system is changed	1.33	30	Review MSA of customer requirements
7	Process control system is changed	1.33	30	Review MSA of customer requirements
8	Process control system is changed	1.33	30	Review MSA of customer requirements
9	Process control system is changed	1.33	30	Review MSA of customer requirements
10	Process control system is changed	1.33	30	Review MSA of customer requirements

Table 4 - MSA acceptance limits

DEFINITION	ACCEPTANCE LIMITS	COMMENTS
Overall GRR	1.33	1.33
Repeatability	0.50	0.50
Reproducibility	0.83	0.83
Linearity	1.33	1.33
Stability	1.33	1.33
Accuracy	1.33	1.33
Resolution	1.33	1.33
Consistency	1.33	1.33

