



# JVR CONSULTANTS

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## **TITLE OF THE PROGRAM: MEASUREMENT SYSTEM ANALYSIS**

### **INTRODUCTION**

Qualification of a Process is done with the help of Measuring Equipments, Personnel with adequate competence and skills, set of procedures, standards, in a defined and controlled environment, etc. The aspects mentioned here are parts of a Measurement System.

If these items are not ensured to be correct before measuring a parameter and qualifying a process, there is every possibility to face Consumer Risk or Producer Risk. Both the risks are costly to an organization.

### **PROGRAMME OBJECTIVES**

To provide the participants the intent of each concepts dealt in this subject. Provide them the understanding by way of giving them an opportunity to work on practical exercise by which they could understand them better and shall try to implement at their work place.

Further giving them an understanding to interpret the data based on which types of actions could be proposed.

### **CONTENTS**

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|--|---|
| 1. MSA Overview                                  | 11. Selecting/Developing Test Procedure |
| 2. ISO/TS 16949:2009 Requirements                | 12. Standards                           |
| 3. Major Changes to MSA III Edition              | 13. Calibration                         |
| 4. Major Changes to MSA IV Edition               | 14. Measurement System Errors           |
| 5. Terminology                                   | 15. Variation                           |
| 6. Statistical Properties of Measurement Systems | 16. Gauge R&R                           |
| 7. Why Perform MSA                               | 17. Number of Distinct Categories (NDC) |
| 8. Measurement System                            | 18. Part Variation                      |
| 9. Factors Affecting Measurement System          | 19. Attribute Gauge R&R                 |
| 10. General Guidelines                           |   |

### **METHODOLOGY**

1. Understand the nature of participants level of understanding about the subject also the nature of their organisatin products and parameters measured.
2. Understanding their practical problem if any. Discussing on them and providing solutions.
3. Individual practical exercises on the concepts like, Bias, Uncertainty, Linearity, Stability, GRR for Variable, GRR for Attribute.
4. Interpreting the results of each exercise. Helping to get information out of each results. Further method taking actions upon each type of results.

### **TARGET GROUP**

Supervisors / Technicians / Engineers / Executives – Design and Development, Production, Quality, Tool room. Maintenance,



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## LEARNING OUTCOMES

- Thorough understanding about the subject.
- Learn to qualify the Measurement System.
- Both Consumer and Producer Risk would be avoided.

## PROFILE OF THE TRAINER MR. V. RAMAVALLABHAN

### **Background:**

- *Physics Graduate with Post Graduate Diploma in Master of Business Administration (PGDMBA), Diploma in Production Management (DPM).*
- **Certified Lead Auditor –**
  1. ISO 9001 (IRCA),
  2. ISO 9001 (RABQSA),
  3. ISO/TS 16949 (SMMT-IF, UK - IATF)
  4. ISO/TS 16949 (AIAG, IAOB, USA - IATF),
  5. AS 9100C(RABQSA),
  6. ISO 27001 (NABET)
  7. ISO 14001(IEMA),
  8. OHSAS 18001( IRCA)
  9. ISO 50001 (BSI)
- **VDA 6.3 Module E Process Auditor in the Product Life Cycle (VDA - QMC. Germany).**
- **Certificate of Lean Competency – Lean Manufacturing from QCI.**
- **Certified IPC Specialist : IPC/WHMA-A-620 Requirements and Acceptance for Cable and Wire Harness Assemblies.**

### **Key Attributes:**

- **Over 2 decades exposed to Multi Branches of industries namely Electrical, Electronics, Mechanical, Plastics and sophisticated screen printing, in the areas of R & D, Manufacturing, Quality, Reliability, Supplier Development, Product Transfer, Agency Approvals, Customer Support, Process Engineering, Etc.**
- **Over a decade in Training and Consulting**
- **Traveled to countries like Singapore, USA and Srilanka for New Product development, Supplier development, Product Transfer, Training & Development of the employees.**
- **His excellence in man management during his corporate life has lifted him to great heights.**



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- *His interpersonal relations and easy access among various levels of the organization he is working with is a great attraction and advantage.*
  - *Presented papers in International seminar on various topics like **TQM, Global Warming, etc.***
  - *Currently since the year 2005 offers **Training (Technical & Soft skills)** and covered 1000s of participants*
  - *The training sessions are handled in 3 languages namely, **Tamil, Hindi and English.** Though based in Chennai, travel throughout India and provide **Training and Consulting.** So far provided training in **Uthanchal, Faridabad, Noida, Surat and Pune** on various concepts in north. In south provided training and consulting in Tamilnadu, Andrapradesh, Karnataka and Kerala.*

**Other advantage would be as he understands Telugu, Malayalam, Kanada and Marathi fairly, the participants could raise queries in respective language if required, and he shall respond appropriately to ensure the knowledge transfer.**

- ***On Consulting,** completed and working on various projects on Business Process Development, TQM, **Quality Circle Consulting** including preparing the team members for competition, **Jury in Quality Circle Competition,** Product Transfer, 5S, Waste Elimination, Kaizen, FMEA, PPAP Documentation, **Facilitate Documenting, Implementing and Certification of ISO 9001, ISO 14001, OHSAS 18001, ISO/TS 16949, ISO/TS 29001, etc.***
- *The industries trained and undertook projects include Automobile, Electronics, Electrical, Mechanical, Plastics, Casting, Forging, Printing, Cement, Sugar, Rubber, Chemical, Construction, Fabrication, Heavy Engineering, Shipping, Garments, FMCG, etc.*
- *His approach on implementing system will be **Simple, Practical, Cost effective** most importantly focusing on **most appropriateness that benefits the organization towards Return on Investments (ROI).***
- ***Awards:** Received Awards for best Soft Skills and Corporate Trainer.*

**For more information** (especially on Service record on training and projects, Clients, interesting Articles, etc.): Please visit: [www.jvrconsultants.net](http://www.jvrconsultants.net)