

ROBUST DESIGN FOR QUALITY ~ TAGUCHI METHODS

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From a practical stand point 'Quality' could be defined as a measure of the extent to which Customer requirements and expectations are satisfied. As evident, customer expectations being always dynamic, there is an ever increasing demand for improving product quality. Since product quality is a derivative of process quality, there is always a thrust for improvising process quality and in turn towards improving process controls, through reduction of variability factors.

In the current manufacturing scenario, with increasing customer needs, variation reduction is the keystone for achieving robustness of any manufacturing process.

Dr. Genichi Taguchi, who has contributed phenomenally across the globe, especially in the manufacturing sector, has evolved proven scientific methods for achieving robustness of the processes with respect to the parametric design and tolerance design. His methods widely acclaimed as the **Taguchi methods**, is considered as one of the foremost tools for achieving process optimization, and adopted successfully since early 1990s worldwide.

To serve this requirement across Indian Industry, a **3 day workshop** has been planned to be implemented, exclusively with respect to the conversion processes in the manufacturing sector.

PRINCIPAL FOCUS AREAS:

The core objectives of the workshop are to enable the participants to :

- a) Understand the concept of variability and its method of reduction, process capability etc...
- b) Traditional approach to process design and its weaknesses
- c) Get a full grasp of applying the full factorial method to any conversion process
- d) Understanding of ANOVA principles and concept of Error
- e) Understanding and application of Orthogonal Arrays
- f) Method of conducting 2 Step design as per Taguchi methods
- g) Product/ Process Optimization
- h) NOISE Strategies, Signal/ Noise ratio, β (Beta) sensitivity etc...
- i) Robust Optimization

COURSE STRUCTURE:

- a) In addition to the faculty inputs and interactions, participants would be conducting an actual DOE experiment in a live shop floor process.
- b) The pattern of the course is tailor made to suit the application of DOE in a manufacturing scenario of conversion processes (Machining Cell)
- c) Since this is treated as an intensive course, the participants are expected to stay focused for protracted periods of time during the 3 days

- d) In addition to the general Industry participants, TPM practicing companies can also integrate Taguchi methods in their Quality Maintenance activities seamlessly.

WHO SHOULD ATTEND?

- I. Product Designers
- II. Quality Managers
- III. Manufacturing Engineers responsible for process specifications in current and new products.
- IV. Production personnel

And Participants from following business areas.

- a) New product development
- b) Advanced Product Engineering
- c) Research and Development
- d) Process Planning / Manufacturing Systems Engineering
- e) Production
- f) Customer Quality Assurance
- g) Supplier Quality Assurance
- h) In-Process Quality
- i) Metrology
- j) Supplier Development & Integration
- k) Procurement
- l) Product Installation & Servicing

ROBUST ENGINEERING APPLICATION PRODUCT GROUPS IN MANUFACTURING

- **Automotive**
- **Chemicals / Electro chemicals and allied products**
- **Electro minerals / Electro photography**
- **Ceramics / Abrasives**
- **Fast Moving Consumer Goods**
- **Capital goods**
- **Mechanical (Inclusive of machining operations / Tool manufacturing)**
- **Construction Equipment**
- **Plastics**
- **Foundries**
- **Textiles**
- **Paper and allied products**
- **Electricals and allied products**
- **Electronics and Semiconductors**
- **Primary metal industries**

- Industrial machineries
- Instruments and allies products

WORKSHOP FEE: INR 25,000 + 18% GST per participant.

Delegate Fee is nonrefundable, however change in nomination is accepted.

Faculty: 1. S Venkateswaran, Principal Counsellor TPM Club India, CII IQ.

2. Expert Opinion (Day 3): Prof. Arun Kumar Chaudhuri, Indian Statistical Institute (ISI). A student and close Associate of Dr. Genichi Taguchi.

Members / Non-members are requested to kindly depute the concerned officials for this important Workshop. The brochure and nomination form is enclosed herewith for your perusal and to send nominations.

Kind Note: All participants will get a Certificate of Participation at the end of the program by CII IQ, TPM Club India.

With Regards,
Abdul Wadood
Principal Counselor & Head
TPM Club India CII IQ.

For Registration/ more details please contact:

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