Manufacturing Technology Training
An IMTMA initiative

Design of Experiments (DOE) for Problem Solving
Date : 10 to 11 February, 2022
Time : 1340 Hrs to 1700 Hrs (Online Mode)

INTRODUCTION

Design of Experiments (DOE) is a mathematical approach to find the importance of the input (x) factor on some output (y) factor and Optimize the setting of x factors. Typically involved in the Lean, TQM and at the Improve stage in Six Sigma approach.
DOE is useful in Design, Sales, Production, Logistics, Human Resource and Finance departments. It will identify the most important input factor for Sales volume, Production, Recruitment, Budgeting, Revenues etc. Thus to decide the focus for the relevant input factor like advertisement, Training, Technical parameters in the machine etc.
This workshop is designed in such a way that a person without having any statistical or core mathematical background can also use DOE in the work.

FOCUS AREAS

Day 1

- Basic mathematics and statistics relevant to DOE
- Concepts of Factors, Responses & Levels.
- 2-Factor 2-Level (22) and 2k experiments
- Problem Solving with Factorial Experiments - multiple factors at two levels.
- Fractional Factorial Experiments
- Analysis of Data. Establishing Cause & Effect relationships.
- Design of Experimental runs and Measuring Results.
- Affect Plots and their interpretation.
- Concepts of Confounding & Blocking.

Day 2

- Lurking Variables, their effects and their identification.
- Introduction to Taguchi's implementation of DOE, Loss Function.
- Evaluation of Signal-to-Noise Ratios.
- Concept of Robust Design.
- Implementation of Design & noise arrays for robust design.
- Applications of DOE for Quality, Cost and Business Process Improvement. DOE in Six Sigma Projects.

KEY TAKE AWAYS

- Accumulate, organize the data and analyze for identifying the key factors and take the relevant decision for better productivity
- Improvise productivity and efficiency with the use of Factorial DOE
- Know the Minitab Software for working in DOE

FEE PER PARTICIPANT (PER LOGIN)

Rs. 4500/-
+18% GST
IMTMA Members/ Micro Companies/ Individuals/ Educational Institutions / Students/ IMTMA Non Members/ Others

USD 180/-
Overseas Participants

Group Concession : 20% for 3 to 5 and 30% for 6 and more delegates being nominated from the same company

FACULTY

Er. Dhananjay M. Apte, Master in Engineering (Mechanical) has 26 years of experience. Presently working as Management & Engineering Consultant, Faculty and the Industry Trainer in Six Sigma, DOE and QC Tools along with Managerial/ Supervisory Effectiveness, Project & Productivity Enhancement skills, Statistical Quality & Process Control (SQC, SPC) and Operations Research. He has conducted more than 100 Training programs and consultancy assignments in the said area.

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REGISTRATION : Prior registration with an online advance payment is must. Number of participants is limited and will be accepted on 'First Come First Serve' basis. A Certificate of participation will be issued to participants.