S M T . S . R . P A T E L   E N G I N E E R I N G   C O L L E G E

FDP Report

A ONE DAY WORKSHOP ON DESIGN OF EXPERIMENT USING TAGUCHI METHOD AND ARTIFICIAL NEURAL NETWORK

Objectives:

☐ Understand the importance of the Taguchi method in research and in industry

☐ Apply Taguchi method in their field of application and analyze the effect of factors affecting the response

☐ Understand and apply Artificial Neural Network (ANN) in research and in industry

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Speakers:

1.Dr. Sanjay R. Patel

Assistant Professor

S.V. National Institute of Technology

2.Dr.MeghalA.Desai

Assistant Professor

S.V. National Institute of Technology

FDP co-ordinators:

Prof. Miral Thakker, Head, ChED.

Prof. Sagar Kapadiya, Asst. Professor, ChED

Summary:

In this workshop, lectures were delivered on the basic principles of statistics, Design of Experiment, Taguchi method and ANN. Also, a live demonstration on software was given to enhance the learning.

Topics :

☐ Introduction to Design of Experiment

☐ Taguchi method and Analysis of variance, Case studies utilizing the Taguchi Method

☐ Introduction to Artificial Neural Network

☐ Hands on Practice

Participated & Submitted By:

Prof. Rishi Kumar

Asstistant Professor, Mechanical Engineering department, SRPEC, Unjha

DETAIL OF FDP

Design of Experiment (DOE) is a technique which deals with performance of experiment with proper planning, then analyzing and interpreting the output response to evaluate the factors, which control the value of a parameter or group of parameters. A strategically planned and executed experiment may provide a great deal of information about the effect on a response variable due to one or more factors. Designers are then able to fix these problems and produce robust and higher yield designs prior to going into production.

Taguchi method is based on performance evaluation of experiments to test the sensitivity of set of response variables to a set of control parameters (or independent variables) with an aim to attain the optimum settings of the control parameters. This technique of optimization is highly appreciated and well defined for process parameters.

Managed by:

Pacific School of Engineering, Surat