

A REVIEW: TAGUCHI EXPERIMENT DESIGN FOR INVESTIGATION OF PROPERTIES OF CONCRETE

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ABSTRACT

Taguchi method is a process optimization technique to investigate the effects of various parameters simultaneously by conducting minimum number of experiments. This approach helps to select the best combination of control parameters so that the product or process is most robust with respect to noise factors. The Taguchi method is a widely used Design of Experiment (DOE), different from other conventional ones and it employs various orthogonal arrays to systematically vary and test different levels of each of the control factors. The parameters affecting the product may be controllable and uncontrollable, so by eliminating the uncontrollable parameters the cost and performance of the experiment could be increased. This review study on Taguchi method explained the optimum control factors that can be chosen for experimental studies in concrete by limiting the time and resources.

KEYWORDS: Taguchi Method, Robust Design, Orthogonal Array, Signal to Noise Ratio