

Taguchi Methods

The term quality engineering encompasses a broad range of engineering & operational activities whose aim is to ensure that a product's quality characteristics are at their target values.

Taguchi has an important influence on its development, especially in the design area both product & process design.

A. Robust Design.. An imp. Taguchi principle is to set specifications on product & process parameters to create a design that resist failure or reduced performance in the face of variation.

• Taguchi calls the variations, noise factor.

• A noise factor is a source of variation that is difficult to control & that affects the functional characteristics of the product.

Three type of noise factor can be distinguished as -

(a) Unit to Unit noise factor.

(b) Internal noise factor.

(c) External noise factor.

(a) Unit to Unit Noise factor:- These are inherent random variation in the process of product caused by variation in raw materials, machinery, & human participation. They are associated with the production process that is statistical in nature.

(b) Internal noise factor:- These source of variation are internal to the product or process.

• They include time dependent factors such as wear of machine component, spoilage of raw material & fatigue of material and operational error such as improper setting on the products or machine tool.