

Optimization of tile laying process parameters using taguchi's method

Abstract

This paper discusses the use of the Taguchi method of experimental design in optimizing process parameters of adhesion strength between tile and mortar bed. The effects of four process parameters of force, thinset mortar thickness, shape of ribs and vibration motor speed have been explored. The primary response under study is the adhesion strength. An L 9 orthogonal array was used to accommodate the experiments. The study predicted that the highest adhesion strength could be obtained with force of 15N, thinset mortar thickness of 4mm, V-shape of thinset ribs and speed of 2500 rpm for vibration motor.

Keywords; Parameter optimization; Thinset mortar; Taguchi method