

Glazing Recipe Selection with AHP for Ceramic Floor Tiles

Alev AKPINAR BORAZAN¹✉, Duygu GOKDAI¹, Ecem Muge ANDOGLU¹, Caglayan
ACIKGOZ¹

¹ *Bilecik Seyh Edebali University, Chemical and Process Engineering Department, Bilecik-TURKEY*

Abstract

In so many different locations from inside the house to exterior walls, ceramic tile products add value to habitat. The various ceramic glaze recipes become a requirement for the different purposes and many different places. Where a large number of options and criteria, priorities can be determined both qualitative and quantitative by using Analytic Hierarchy Process (AHP). In this process decision problem is divided into steps and steps create a hierarchical structure. Problem can be solved by utilizing relation between the steps. In this study, 3 different glaze recipes and 6 different selection criteria belong to a firm, which produces indoor floor tile, were compared according to analysis results. The 6 criteria were determined as water absorption (K1), breaking strength (K2), max. force (K3), expansion with moisture (K4), flexural strength(K5) and coefficient of linear expansion (K6), and then the effects of the criteria were obtained, according to experimental results. AHP was applied and made decision on the most convenient glazing recipe. Influence degree sequence of the criteria was obtained as $K2 > K3 > K5 > K1 > K4 > K6$.

Keywords: *AHP, Floor Tiles, Alternative, Criteria, Hierarchy*

✉ *Corresponding Author Email* : alev.akpinar@bilecik.edu.tr