

UTILIZATION OF PAPERMILL SLUDGE IN THE BRICK INDUSTRY

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Abstract

This paper presents a parametric experimental study which investigates the potential use of paper mill sludge (Pulp) for producing a low-cost and light weight composite brick as a building material. These alternative bricks were made with papercrete. An experimental investigation has been carried out to study the compressive strength, unit weight, and water absorption. In this study, nine different mix proportions were tried by utilizing the Paper pulp and industrial by products like Fly ash and Rice husk ash as mineral admixtures. The results show that the effect of high-level replacement of paper wastes does not exhibit a sudden brittle fracture, and it reduces the unit weight dramatically and introduces smoother surface compared to the current conventional bricks and concrete blocks in the market. This innovative cost effective bricks can be used for walls and as wooden board substitute and best alternative for conventional bricks.

Keywords: Paper pulp; Compression; Water absorption; Light weight; Sound absorbent