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TITLE OF PROJECT –

VALORIZATION OF FLY ASH BRICKS INCORPORATING POLYURETHANE WASTE

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ABSTRACT

In recent years, polyurethane-based construction materials have garnered significant attention for their exceptional attributes such as lightweight nature, excellent insulation properties, and environmental sustainability. This research endeavors to conduct an extensive investigation into the mechanical properties of polyurethane bricks, a pioneering addition to the repertoire of building materials, with the primary objective of evaluating their suitability across diverse construction applications. A comprehensive battery of laboratory tests, encompassing assessments of compressive strength, tensile strength, flexural strength, and resistance to impact, has been meticulously executed to elucidate the performance characteristics of polyurethane bricks under varying loading conditions. The results unveiled from this study portray polyurethane bricks as possessing commendable mechanical attributes, characterized by noteworthy strength-to-weight ratios and remarkable energy-absorption capabilities. These findings hold the promise of a paradigm shift within the construction industry, with polyurethane bricks emerging as a potential harbinger of durable, lightweight, and energy-efficient building solutions. It is imperative that further research and developmental endeavors be undertaken to fine-tune the material's properties and expedite its integration into mainstream construction practices.

KEYWORDS: Polyurethane Bricks, Mechanical Properties, Energy Efficiency, Fly Ash

CATEGORY: Concrete Technology & Building Materials