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Patent Search

Invention Title	EVALUATING THE MECHANICAL PROPERTIES OF POROUS PAVEMENTS WITH ALCCOFINES AND ALKALI-ACTIVATED GGBS
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Abstract:

The construction industry faces significant challenges in balancing performance, sustainability, and environmental impact in pavement systems. Traditional porous pavements, while effective in enhancing drainage and reducing urban heat islands, often struggle with issues related to durability and environmental footprint. Recent advances in alternative materials such as alccofines and alkali activated ground granulated blast furnace slag (GGBS) offer promising solutions but have not been extensively studied in the context of porous pavements. This study aims to address these challenges by integrating alccofines and alkali activated GGBS into porous pavement systems, assessing their combined effects on performance and sustainability. A series of experimental investigations were conducted to evaluate the impact of incorporating various proportions of alccofines and alkali activated GGBS in porous pavement mixtures. Key performance metrics such as permeability, compressive strength, durability, and environmental impact were systematically analysed.

Complete Specification

Description: The following

Materials were used

1. Cement:

Ordinary Portland cement (

2.

GGBS (Ground Granulated Blast Furnace Slag): GGBS is used as a partial replacement for cement. The replacement level can vary from 10 to 50% by weight.

3

Alcofines: Alcofines is used as a partial replacement for cement. The replacement level can vary from 10 to 50% by weight.

4. Aggregates:

Standard course of size 5mm and fine aggregates used in concrete mixes.

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