

Experimental Study of PCB and Tyre Chips Waste on Strength of Concrete

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Abstract: The generation of waste materials, including Printed Circuit Boards (PCBs) and discarded tyres, has reached alarming levels, presenting significant environmental and waste management challenges. This paper presents an experimental study aimed at investigating the effects of incorporating PCB and tyre chips waste as partial replacements for coarse aggregates in concrete. The primary objective is to assess the impact of these waste materials on the strength properties of concrete, with a focus on compressive strength and workability. The experimental program involves the preparation of concrete specimens with varying percentages of PCB and tyre chips waste, with detailed characterization of the waste materials. The results of this study will provide valuable insights into the viability of utilizing PCB and tyre chips waste as sustainable alternatives in concrete production, contributing to waste reduction and promoting environmental sustainability in the construction industry.

Keywords: PCB waste, Tyre Chips, concrete, compressive strength, workability

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