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TITLE OF PROJECT: Utilizing PET Bottles in Concrete Beams for Sustainable Construction

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ABSTRACT (150-300 words):
This study aims to investigate the feasibility of incorporating PET (Polyethylene Terephthalate) bottles in concrete beams. The research explores the potential benefits of using PET bottles as a sustainable alternative to traditional construction materials. The experimental approach involves replacing a portion of the aggregate in the concrete mix with shredded PET bottles. The effects of PET bottle content on the mechanical properties of the concrete beams are evaluated through compression and flexural tests. The results demonstrate that the addition of PET bottles enhances the ductility and toughness of the concrete beams. Furthermore, the utilization of PET bottles helps reduce plastic waste and promotes environmental sustainability. The study also investigates the long-term durability of the concrete beams by assessing their resistance to moisture and chemical degradation. Cost analysis is conducted to evaluate the economic viability of incorporating PET bottles in concrete beams. The findings suggest that PET bottle reinforcement can contribute to cost-effective and eco-friendly construction practices. Overall, this research presents a promising approach for utilizing PET bottles in concrete beams, offering a sustainable solution for the construction industry

KEYWORDS: Eco-friendly, sustainable, Plastic waste .

CATEGORY: Concrete Technology and strauture .