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Seminar Report

on

"PLASTIC ROADS"

Report submitted in partial fulfillment of curriculum prescribed for

BACHELOR OF ENGINEERING
IN
CIVIL ENGINEERING

by

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July, 2023

ABSTRACT

Plastic pollution has become a pressing environmental issue worldwide, prompting the need for innovative solutions to reduce waste and promote sustainability. Plastic roads, a novel approach in road construction, offer a promising solution by incorporating plastic waste into the pavement mix. This abstract provides an overview of the concept of plastic roads and explores their potential benefits. Plastic roads involve shredding plastic waste into small particles and mixing them with hot bitumen to create a polymer-modified bitumen. This modified bitumen, when combined with aggregates, forms a durable road surface that exhibits improved flexibility, strength, and resistance to cracking. By utilizing plastic waste, the construction of plastic roads not only reduces the environmental burden of plastic pollution but also promotes recycling efforts.

The benefits of plastic roads are manifold. Firstly, they contribute to waste reduction by recycling plastic waste that would otherwise end up in landfills or contaminate the environment. Additionally, the incorporation of plastic waste in road construction enhances the durability and lifespan of the roads, resulting in reduced maintenance requirements and costs. Plastic roads exhibit improved resistance to wear and tear, temperature fluctuations, and heavy traffic, thereby reducing the formation of potholes and enhancing road safety.

However, it is essential to consider potential challenges and limitations associated with plastic roads, such as the need for proper waste segregation and processing, ensuring the longevity of the plastic-modified pavement, and evaluating the long-term environmental impact of using plastic in road construction. Further research and development are needed to optimize the mix design, assess the long-term performance, and evaluate the economic and environmental feasibility of plastic roads. With continued innovation and implementation, plastic roads have the potential to revolutionize the construction industry, contributing to a cleaner environment and more sustainable infrastructure.