



3rd International Conference on
Trends n Herald in Engineering Excellence and Metamorphosis
(THEEM-2023)



Organized by
H. J. THIM TRUST'S

THEEM COLLEGE OF ENGINEERING

Certificate of Appreciation

This is to certify that Prof./Dr./Mr./Ms. **VIKRANT KOTHARI** of
Vidyavardhini's College of Engineering and Technology, Vasai has participated & presented a paper titled
Review of Existing Pothole Repair System for Flexible Pavement in
THEEM-2023 held on 28th & 29th April 2023 at Theem College of Engineering, Boisar (E), Dist. Palghar - 401501.

Conference Chair
Dr. N. K. Rana

Conference Chair
Dr. Riyazoddin Siddiqui

Powered by



In Collaboration & Association with



Sponsored by



REVIEW OF EXISTING POTHOLE REPAIR SYSTEM FOR FLEXIBLE PAVEMENT

Vrushali Gavit¹, Navin Pandey², Roshani Salunkhe³, Vaishnavi Wani⁴, Prof. Vikrant Kothari⁵

^{[1],[2],[3],[4]} BE Student, Civil Engineering, Vidyavardhini's College of Engineering and Technology, Vasai, India

^[5] Assistant Professor, Civil Engineering, Vidyavardhini's College of Engineering and Technology, Vasai, India

February 24, 2023

Abstract : Pothole can be defined as pit or hole produced by wear or weathering in a road surface or Pavement. Development of potholes on roads and streets of India has become common phenomenon nowadays. Quite often, Potholes are repaired with antiquated techniques such as placing soil or aggregate, Concrete, Hot mixed Asphalt, Cold mixed Asphalt, Concrete Paver Blocks etc. The traditional methods are not reliable these days because some of them require large amount of time. The quality of repairing is also not up to the mark and are neither cost effective nor Eco-Friendly. In this research, Survey has been conducted by us to identify causes of Pothole, traditional repair methods, design of Paver blocks and their cost. In the instance of literature review it was found out that Patching potholes technique using Paver blocks replacing the key constituent, entire percentage of Aggregate with Demolition waste in addition of 25% of Fly ash with 75% of Cement. Various tests on the materials and composite are conducted. Comparison was done on the basis of Engineering Properties, Performance, Cost and Sustainability of the Paver blocks made from Demolition debris to Standard used Paver Blocks. Based on a survey of the literature, paver blocks perform best when they are replaced with Construction Waste and Fly ash since they are more optimum.

Keywords— *Pothole Repair, Pavement, Paver Blocks, Demolition Waste, Flyash etc..*

1. INTRODUCTION

The level of traffic on the roads is high today, and traffic intensity has been increasing quickly. To ensure acceptable riding quality and to accommodate future traffic, the road network needs to be enhanced. However, there are several elements that lead to road failure and inconvenience for users. Potholes are one significant element that seriously damages the road pavement. It is a pit or hole created by weathering or wear in a road surface. Tyre and suspension damage to vehicles is possible if they become big enough. Roads with loose gravel and potholes present a risk for