

Study of Construction of Road Pavement by Waste Material

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ABSTRACT: With the evolution of the road industry and growing traffic on roads, construction materials have also been evolved and more unconventional ingredients have been incorporated. The rationale was the scarcity of conventional natural materials and the jeopardized environment which have underpinned the tendency towards evaluation other materials resources to be incorporated in the road industry. The inclusion of such materials entails several secondary and tertiary materials. Several waste by-products and materials have been investigated, assessed, evaluated for utilizations and practiced in the field. Depending on the attributes of the characteristics of the recycled material, the inclusion varies. Some recycled material have been proven to possess preferable properties over the other and have performed satisfactorily in the field.

KEYWORDS: Replacement, Analysis, E- waste, Plastic waste, Flexible Pavement, Construction Material, Light Weight Aggregate

I. INTRODUCTION

The major threat to the environment is the disposal of waste plastic. In a highway, the potholes and corrugation is the major problem. Plastic pavement will be a better solution to the above stated problems. A material that contain one or more organic polymer of large molecular weight, solid in its finished state, can be shaped by its flow is called as "plastic". The durability of plastic is high and it degrades very slowly. Also plastic has high resistance to degradation. Plastic can be divided into two major categories- thermosets & thermoplastics. Thermosets have high durability and strength because it solidifies irreversibly when heated, henceforth can be used primarily in construction application. Plastic is a non-degradable waste, causes greenhouse effect and global warming. The various experiments have been carried out whether the waste plastic can be reused productively. The various literature indicated that the waste plastic when added to hot aggregates will form a fine coat of plastic over the aggregate and such aggregates when mixed with binder is found to have higher strength, higher resistance and better performance over a period of time. Along with bitumen, use waste plastic increases its life and smoothness. It is economical and ecofriendly.

II. SCOPE & PROMOTIONAL EFFORTS BY THE GOVERNMENT

One lakh km of road built using plastic waste, government aims to double it, and Plastic has been used in the 270-kilometre-long Jammu Kashmir National highway. About 1.6 tons of plastic waste was used in the two kilometer-long stretch of Delhi-Meerut highway news UP Gate, according to Hindustan. The central government has been