

A review on Rejuvenating Materials Used with Reclaimed Hot Mix Asphalt

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ABSTRACT

In recent years, flexible pavement construction technology has relied heavily on the use of reclaimed asphalt pavement (RAP). However, the brittle nature of RAP, which stems from the use of an aged asphalt, has introduced numerous complexities into the process, with important implications to pavement service life. The properties of the aged asphalt can be rejuvenated to improve the performance and the behavior of RAP mixtures. This paper presents a review of past works that have used rejuvenating materials with RAP, including their benefits and drawbacks, as well as the optimal approach to increase RAP content in asphaltic mixtures. The method of rejuvenating aged asphalt and the mechanism of rejuvenation are also reviewed. The findings of this review can be used to predict the current and future challenges in the regeneration of RAP mixtures using rejuvenating materials.

KEYWORDS: Reclaimed asphalt pavement (RAP); Hot mix asphalt (HMA); Rejuvenators; Recycling agents, Aged asphalt, Stiffness.

ACKNOWLEDGMENTS

The authors express their gratitude to the Ministry of Education Malaysia for funding this work through the Fundamental Research Grant Scheme (**Grant Number R.J130000.7851.5F019, Q.J130000.2651.16J15 and R.J130000.7846.4F827**).