

Assessing Prime Coat Permeation with Superpave Gyrotory Compaction

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Abstract. Identifying more lab methodologies for obtaining optimum prime coat application rates has been a major concern in the pavement construction process. This coating significance is revealed in preserving resilience and longevity in pavement construction. Weak bonding and increasing binder waste are resulted from lesser or excessive prime amount. This paper focuses on some issues in the construction process, such as uncertainty of surface conditions and the absence of uniform testing procedures. These issues signify the need for creative proposals and more substantial researches. Finally, the research demonstrates an easier lap method in obtaining the most suitable prime coat application rate through the penetration test. It depends on the superpave gyrotory compactor emphasizing its accuracy, effectiveness and capability of enhancing pavement durability. Therefore, this extensive overview establishes the framework for additional research into the suggested methodology and the optimum obtained results of spreading prime coat lay within the rates of the Egyptian Code.

Keywords: Asphalt, Prime Coat, Gyrotory, Superpave, Penetration test

