

# EXPERIMENTAL STUDY OF COCONUT HUSK AS FIBER IN HOT MIX ASPHALT

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## ABSTRACT

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This project is conducted regarding using coconut husk as fiber in Hot Mix Asphalt (HMA). Hot Mix Asphalt is a combination of approximately 95% stone, or gravel bound together by asphalt cement, a produce of crude oil. Asphalt cement is heated, combined and mix with the aggregates at an HMA facility.

The objective of adding coconut husk as fiber is to reduce of asphalt in Hot Mix Asphalt. The performance of the asphalt with fibre is determined in terms of characteristics of stability, flow and voids. The process and procedure are done based on Jabatan Kerja Raya (JKR) guidelines, requirements and specifications.

Preliminary studies are taken in order it identify pavement problems in Malaysia. The reading and studies include asphalt, Hot Mix Asphalt (HMA), fibers, roads materials, design of pavements and methodology. The detailed information and some data are included in chapter one and chapter two.

The preparation of raw materials such as coconut husk and aggregates are shown in this project. Machines such as Marshall Compactor Machine, Marshall Stability Machine and Hydraulic Jack are shown as well. The results obtained during the experiment are formed in tables and charts. Comparisons between original sample with asphalt with fiber are made.