

ABSTRAK

Penggunaan *filler* bertujuan untuk meningkatkan kerapatan dan stabilitas massa campuran. Mengingat pentingnya kegunaan *filler* pada campuran maka perlu dilakukan inovasi bahan pengganti *filler*. Salah satunya dengan memanfaatkan bubuk talk. Tujuan penelitian ini untuk mengetahui kelayakan bubuk talk sebagai pengganti *filler* pada campuran AC-WC dengan melihat karakteristik *Marshall*, *Indirect Tensile Strength*, dan *Cantabro*.

Penelitian dilakukan 4 tahap, yaitu tahap pertama pengujian sifat material yang terdiri dari pengujian agregat, aspal dan *filler*. Tahap kedua menentukan kadar aspal optimum pada proporsi *filler* pengganti 0%, 25%, 50%, 75% dan 100% *filler* bubuk talk. Tahap ketiga melakukan uji *Marshall*, uji *Indirect Tensile Strength*, dan uji *Cantabro*. Tahap ke empat melakukan analisis, pembahasan dan pengambilan kesimpulan dari hasil pengujian yang dilakukan sesuai dengan persyaratan dan metode dari Bina Marga tahun 2010.

Hasil penelitian menunjukkan bahwa *filler* bubuk talk dapat digunakan sebagai *filler* pengganti dalam campuran AC-WC. Hasil pengujian *Marshall* menunjukkan bahwa campuran mengalami perubahan karakteristik *Marshall* cukup signifikan yaitu pada kemampuan campuran menahan beban semakin meningkat dan kelelahan semakin meningkat. Hal ini dapat dilihat pada nilai stabilitas mengalami peningkatan, *flow* mengalami peningkatan, nilai *MQ* mengalami kenaikan, *VITM* mengalami peningkatan, *density* mengalami peningkatan, *VFWA* mengalami penurunan dan *VMA* mengalami penurunan. Kemampuan menahan gaya tarik (*Indirect Tensile Strength*) campuran AC-WC seiring peningkatan proporsi *filler* bubuk talk meningkat hingga pada kadar *filler* pengganti 50%, setelah itu nilai *ITS* menurun seiring bertambahnya kadar *filler* pengganti 75%, dan 100%. Nilai *Cantabro* pada campuran AC-WC yang menggunakan bubuk talk sebagai *filler* pengganti mengalami penurunan, dengan semakin banyaknya persentase pengganti *filler* bubuk talk.

Kata Kunci : AC-WC (*Asphalt Concrete-Wearing Course*), *Filler* Bubuk Talk, Karakteristik *Marshall*, *Indirect Tensile Strength*, *Cantabro*.

ABSTRACT

The use of filler aims to improve the density of the filler and stability a mixed mass. Because of the importance of filler uses program needs to be done on a mixture of substitute innovation filler. One of them is by making use of the powder talk. The purpose of this research to know the worthiness of the powder talk as a substitute for on a mixture of filler AC-WC by seeing characteristic of Marshall, Indirect Tensile Strength, and Cantabro.

Research in 4 stage, in the first testing material properties consisting of testing aggregate, asphalt, and filler. The second phase determined asphalt steady on the proportions filler a substitute for 0%, 25%, 50%, 75%, and 100% filler powder talk. The third stage conducting a Marshall, Indirect Tensile Strength, and Cantabro. The stage to four, discussion and the conclusions from the carried out according to the requirements and methods of Bina Marga in 2010.

The research results show that powder filler talk can be used as a substitute filler in a AC-WC mixture. The test results show that mix of Marshall had a change characteristic Marshall quite significant that is on the ability to support the mixture is accelerating and flexibility is increasing. It can be seen in the value of increased stability, flow increased, the value of MQ increased, VITM experienced an increase in, there was an increase in density, VFWA decrease and VMA has experienced a fall in. The ability to hold the force of attraction (Indirect Tensile Strength) AC-WC mixture as an increase in the proportion powder increased filler talk to on the replacement filler 50%, after that the its has decreased as you get the replacement filler 75%, and 100%. The Cantabro on a mixture of AC-WC using talk filler powder as a substitute decrease, with the increasing number of a powder percentage filler talk.

Keywords : AC-WC (Asphalt Concrete-Wearing Course), Powder Talk Filler, Characteristic of Marshall, Indirect Tensile Strength, Cantabro.