INTISARI

Penelitian ini bertujuan untuk mengetahui seberapa besar pengaruh pemakaian *additive wetfix-be* terhadap karakteristik campuran HRS-WC. *Additive wetfix-be* merupakan bahan kimia yang dapat meningkatkan viskositas aspal sehingga perekatan antara aspal dan agregat akan semakin kuat. Hal ini dapat mencegah pengelupasan dan akan meningkatkan kinerja campuran beton aspal sehingga dapat memperpanjang umur perkerasan jalan.

Penelitian dilakukan dengan membandingkan karakteristik campuran beton aspal yang tanpa dan dengan yang menggunakan *additive wetfix-be*, berdasarkan metode pengujian *Marshall* dan mengacu pada Spesifikasi Umum Bina Marga 2010. Perbandingan dilakukan pada kondisi KAO. Untuk mendapatkan KAO maka dibuat benda uji tanpa *additive wetfix-be* sebanyak 5 variasi. Masing-masing variasi dibuat 5 buah benda uji dengan menggunakan kadar aspal yang berbeda (6,0%; 6,5%; 7,0%; 7,5%; 8,0%). Kemudian dibuat masing-masing 10 buah benda uji pada KAO dengan dan tanpa *additive wetfix-be* 0,3%.

Hasil penelitian menunjukkan bahwa pemakaian *additive wetfix-be* 0,3% pada kondisi KAO (6,25%) menghasilkan campuran beton aspal HRS-WC yang terbaik. Dimana bila dibandingkan dengan campuran beton aspal HRS-WC tanpa *additive wetfix-be*, stabilitasnya akan meningkat sebesar 6,94% dari 1.900,8 kg, *flow* meningkat sebesar 0,98% dari 4,100 mm, *Marshall Quotient* cenderung meningkat 5,91% dari 454,519 kg/mm, *density*, VFA dan TFA meningkat sebesar 0,048% dari 2,297 gr/cm^3, 2,22% dari 72,299% dan 2,14% dari 7,102 μm sedangkan VIM dan VMA cenderung menurun sebesar 5,99% dari 5,289% dan 0,22% dari 18,062%. Untuk indeks kekuatan sisa mengalami peningkatan sebesar 0,85% dari 90,625%.

Kata kunci: HRS-WC, karakteristik *Marshall*, *additive wetfix-be*.

ABSTRACT

This research aimed to find out how big the effect of using additive wetfix-be toward mixture characteristic of HRS-WC is. Additive wetfix-be is a chemical substance which is able to increase bitumen viscosity between the bitumen and aggregate to be thicker. This is intended to prevent abrading and to increase the mixture performance of concrete bitumen in order to lengthen the road hardening age.

This research was conducted by comparing mixture characteristic of bitumen concrete with additive wetfix-be and non additive wetfix-be regarding to the research method of Marshall and referring to general specification of Bina Marga 2010. The comparation was conducted by considering the condition of optimum bitumen content. To gain the optimum bitumen content, then it was fulfilled through making testing tool without using additive wetfix-be for 5 variations. The contents were 6.0%, 6.5%, 7.0%, 7.5%, and 8.0% for each variation which was made into testing tool. Then, making testing tool under condition of optimum bitumen content with and without the use 0.3% of additive wetfix-be was made to be 10 tools. All samples tested through the characteristics of Marshall were density, VIM, VMA, VFA, TFA, stability, flow and Marshall Quotient.

Research output showed that the use of additive wetfix-be for 0.3% toward 6.25% optimum bitumen content produced the best HRS-WC bitumen mixture. It could be compared with non additive wetfix-be to show that stability increased to 6.94% of 1900.8 kg, flow increased to 0.98 % of 4.10 mm, Marshall Quotient tended to increase 5.91% of 454.519 kg/mm, density, VFA and TFA increased to 0.048% of 2.297 gr/cm^3, 2.22% of 72.299% and 2.14% of 7.102 μm whereas VIM and VMA tended to decrease to 5.99% of 5.289% and 0.22% of 18.062%. To index retained strength increased to 0.85% of 90.625%.

Keywords: *HRS-WC, Marshall characteristic, additive wetfix-be.*