

ABSTRAK

Nama : Dony Triyatno, Nim : 15512897, Dosen Pembimbing I Yosef Cahyo SP., ST., MT., M.Eng., Dosen Pembimbing II : Dr. Ahmad Ridwan, SE.ST.MT., Prodi Teknik Sipil Fakultas Teknik Universitas Kadiri, dengan Judul Tugas Akhir : **PENELITIAN CAMPURAN ASPAL BETON DENGAN MENGGUNAKAN FILLER AMPAS TAHU.**

Penelitian ini bertujuan untuk mengetahui campuran Ampas Tahu dengan menggunakan metode Marshall, dan untuk mengetahui kadar aspal optimum yang dihasilkan pada campuran aspal beton dengan filler Ampas Tahu, di tinjau dari stabilitas marshall, *flow*, VIM (*voids In Mix*), VMA (*Void In Mineral Agregate*), VFB (*Void Filled Bitumen*), dan *Marshall quotient* (MQ).

Metode campuran aspal beton dalam penelitian ini menggunakan aspal minyak AC 60/70. Penelitian ini terdiri dari 5 sampel, masing-masing menggunakan kadar aspal yang berbeda yaitu: 5%, 5,5%, 6%, 6,5%, 7%. Dengan masing-masing sampel terdiri dari 3 varian sampel benda uji. Penelitian ini dilaksanakan di Laboratorium Teknik, universitas kadiri. Tahapan penelitian meliputi agregat kasar batu koral tertahan saringan no. 8 (2,36mm), agregat halus dengan pasir sungai brantas lolos saringan no. 8 (2,36mm), dan *filler* menggunakan ampas tahu dengan lolos saringan no. 200 (0,075mm).

Hasil uji dari penelitian ini pada karakteristik Marshall didapat kadar Aspal Optimum 5 % dan 6 % dengan nilai rerata Stabilitas 712 dan 881, nilai rerata *Flow* 3,3 mm dan 2,4 mm, nilai rerata VIM (*voids In Mix*) 4,65% dan 4,24%, nilai rerata VMA (*Void In Mineral Agregate*) 19,29% dan 17,87%, nilai rerata VFB (*Void Filled Bitumen*) 75,41% dan 76,15%, dan nilai rerata *Marshall quotient* (MQ) 271 kg/mm dan 433kg/mm.

Kata Kunci: Aspal Beton, Metode Marshall, Ampas Tahu

ABSTRACT

Name: Dony Triyatno, Nim: 15512897, Supervisor I Yosef Cahyo SP., ST., MT., M.Eng., Supervisor II: Dr. Ahmad Ridwan, SE.ST.MT. , Civil Engineering Study Program, Faculty of Engineering, University of Kadiri, with the title Final Project: **RESEARCH OF ASPHALT CONCRETE MIXED BY USING TOFU DREGS FILLER KNOWS.**

This study aims to determine the mixture of Tofu Dregs by using the Marshall method, and to find out the optimum asphalt levels produced in concrete asphalt mixtures with Tofu Fill fillers, in terms of marshall stability, flow, VIM (voids In Mix), VMA (Void In Mineral) Agregate), VFB (Void Filled Bitumen), and Marshall quotient (MQ).

The asphalt concrete mixture method in this study uses AC 60/70 asphalt. This study consisted of 5 samples, each using a different asphalt content, namely: 5%, 5.5%, 6%, 6.5%, 7%. With each sample consisting of 3 test sample variants. This research was conducted at the Laboratory of Engineering, the university attended. The stages of the study included coarse coral aggregate suspended by sieve no. 8 (2,36mm), fine aggregate with Brantas river sand escapes sieve no. 8 (2.36mm), and the filler uses tofu dregs by passing the filter no. 200 (0.075mm).

The test results of this study on Marshall characteristics obtained Optimum Asphalt content of 5% and 6% with a mean value of Stability 712 and 881, the average flow value of 3.3 mm and 2.4 mm, the average value of VIM (voids In Mix) 4.65% and 4.24%, mean VMA (Void In Mineral Aggregate) values of 19.29% and 17.87%, mean VFB (Void Filled Bitumen) values of 75.41% and 76.15%, and Marshall quotient mean values (MQ)) 271 kg / mm and 433kg / mm.

Keywords: Concrete Asphalt, Marshall Method, Tofu Dregs