

ABSTRAK

Sri Kurniasih Nim (5173250028) Pengaruh Variasi Komposisi Serat Sabut Kelapa Dan Abu Sekam Padi Konstan Terhadap Modulus Elastisitas Pada Beton Memadat Sendiri Skripsi. Fakultas Teknik – Universitas Negeri Medan. 2022

Beton merupakan pilihan utama dalam pembuatan struktur, selain dari bahan penyusunnya yang mudah didapatkan beton juga memiliki nilai kuat tekan yang tinggi dan kemudahan dalam perawatannya, modulus elastisitas juga sangat mempengaruhi pada kekuatan beton itu sendiri, dalam penelitian ini abu sekam padi dan serat kelapa digunakan sebagai bahan substitusi semen. Penelitian ini menggunakan metode eksperimen di laboratorium menggunakan benda uji berukuran 15 x 30 cm dan melalui tahap perawatan selama 28 hari. Variasi penambahan abu sekam padi 7.5 % sebagai substitusi semen dan serat kelapa sebanyak 0.01%, 0.02%, 0.03%. jumlah benda uji yang dibuat sebanyak 24 buah untuk pengujian kuat tekan dan modulus elastisitas beton, dari hasil pengujian kuat tekan beton didapatkan kuat tekan maksimum sebesar 29.12 MPa dengan modulus elastisitas beton nilai tertinggi didapatkan pada campuran variasi abu sekam padi 7.5% dan serat kelapa 0.03% sebesar 25430.56 MPa.

Kata kunci : beton, beton serat, modulus elastisitas, kuat tekan

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ABSTRACT

Sri Kurniasih Nim (5173250028) Effect of Variations in the Composition of Coconut Husk Fibers and Constant Rice Husk Ash On Modulus of Elasticity in Self-Compacting Concrete Thesis. Faculty of Engineering – Medan State University. 2022

Concrete is the main choice in the manufacture of structures, apart from the constituent materials that are easy to obtain concrete also has a high compressive strength value and ease in its maintenance, the modulus of elasticity also greatly affects the strength of the concrete itself, in this study rice husk ash and coconut fiber were used as cement substitution materials. This study used an experimental method in the laboratory using a test object measuring 15 x 30 cm and went through the treatment stage for 28 days. Variations in the addition of rice husk ash were 7.5% as a substitute for cement and coconut fiber as much as 0.01%, 0.02%, 0.03%. the number of test objects made as many as 24 pieces for testing the compressive strength and modulus of elasticity of concrete, From the test results of the compressive strength of concrete, a maximum compressive strength of 29.12 MPa was obtained with the highest value of concrete elasticity modulus obtained in a mixture of variations of rice husk ash of 7.5% and coconut fiber of 0.03% of 25430.56 MPa.

Keywords : concrete, fiber concrete, modulus of elasticity, compressive strength

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