PENGARUH PENAMBAHAN ALUMINIUM PASTA DENGAN *SIKACIM CONCRETE ADDITIVE* ATAU KATALIS MEKPO TERHADAP SIFAT FISIS PAPAN BETON RINGAN BERSERAT SABUT KELAPA

Skripsi

Deri Wahyuni
1410442053

Pembimbing
Drs. Alimin Mahyudin

JURUSAN FISIKA
FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM
UNIVERSITAS ANDALAS
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ABSTRAK

Telah dilakukan penelitian tentang pengaruh penambahan aluminium pasta dengan *sikacim concrete additive* dan katalis MEKPO terhadap sifat fisis papan beton ringan berserat sabut kelapa. Penelitian bertujuan untuk mengetahui persentase maksimum penambahan aluminium pasta terhadap sifat fisik minimum dan sifat mekanik maksimum pada papan beton ringan berserat sabut kelapa. Persentase aluminium pasta yang digunakan adalah 0,05%, 0,1%, 0,2%, 0,3%, dan 0,4%. Pengujian yang dilakukan pada sampel yaitu uji sifat fisik (densitas dan porositas) dan uji sifat mekanik (kuat tekan dan kuat lentur). Berdasarkan hasil pengujian yang telah dilakukan, penambahan aluminum pasta dengan *sikacim concrete additive* dan katalis MEKPO berbanding terbalik dengan densitas dan berbanding lurus dengan porositas. Densitas minimum yang didapatkan sebesar 1,71 g/cm^3 pada penambahan aluminium pasta 0,4% dengan *sikacim concrete additive*. Porositas maksimum yang didapat sebesar 39,1% pada penambahan aluminium pasta 0,4% dengan *sikacim concrete additive*. Nilai kuat tekan maksimum sebesar 78 kg/cm^2 pada penambahan aluminium pasta 0,05% dan kuat tekan semakin berkurang ketika penambahan aluminium pasta semakin meningkat dengan kuat tekan minimum sebesar 34 kg/cm^2 pada penambahan aluminium pasta 0,4%. Kuat lentur maksimum yang dihasilkan yaitu 72 kg/cm^2 pada penambahan aluminium pasta 0,1%. Semakin besar penambahan aluminium pasta, semakin menurun nilai kuat lentur dengan nilai kuat lentur minimum sebesar 45 kg/cm^2 pada penambahan aluminium pasta 0,4%. Nilai densitas, porositas dan kuat tekan papan beton ringan berserat sabut kelapa telah memenuhi standar SNI-03-3449-2002 dan SNI-03-2105-2006 namun kuat lentur belum memenuhi standar.

Kata kunci: aluminium pasta, *sikacim concrete additive*, katalis MEKPO, serat sabut kelapa, papan beton ringan

THE EFFECT OF ADDITION OF ALUMINIUM PASTA WITH SIKACIM CONCRETE ADDITIVE AND MEKP CATALYST ON THE PHYSICAL PROPERTIES OF LIGHTWEIGHT CONCRETE BOARD COCONUT FIBER

ABSTRACT

Research on the effect of addition of aluminium pasta with sikacim concrete additive and MEKP catalyst on physical properties of lightweight concrete board coconut fiber. The study aimed to determine the maximum percentage of aluminium pasta addition to minimum physical properties and maximum mechanical properties on lightweight concrete board with coconut fiber. The percentage of aluminium pasta used was 0,05%, 0,1%, 0,2%, 0,3%, dan 0,4%. Tests carried out on the sample are physical properties (density and porosity) and mechanical properties (compressive strength and flexural strength). Based on the results of tests that have been done, adding aluminium pasta with sikacim concrete additive and MEKP catalyst is inversely proportional to porosity. The minimum density obtained is 1,71 g/cm^2 in addition of 0,4% aluminium pasta with sikacim concrete additive. The maximum porosity obtained is 39,1% in addition of 0,4% aluminium pasta with sikacim concrete additive. The maximum compressive strength value of 78 kg/cm^2 on the addition of aluminium pasta 0,05% and the compressive strength decreases when the addition of aluminium pasta increses with a minimum compressive strength of 34 kg/cm^2 in the addition of 0,4% aluminium pasta. The maximum flexural strength produced is 72 kg/cm^2 in the addition of 0,1% aluminium pasta. The greater the addition of aluminium pasta, the lower the flexural strength with a minimum flexural of 45 kg/cm^2 in the addition of 0,4% aluminium pasta. The values of density, porosity, and compressive strength of coconut fiber fibrous lightweight concrete boards have met the standards of SNI 03-3449-2002 and SNI 03-2105-2006 but their flexural strength has not met the standard.

Keyword: aluminium pasta, sikacim concrete additive, MEKP catalyst, coconut coir fiber, lightweight concrete board