ABSTRAK

Umumnya paving block digunakan untuk perkerasan jalan, pedestrian dan trotoar. Selain itu dapat juga digunakan pada area khusus seperti area pelabuhan peti kemas, lahan parkir, area terbuka dan area industri. Penggunaan paving block sangatlah mendukung go green yang telah dikumandangkan secara nasional/internasional, karena daya serap air melalui pemasangan paving block dapat menjaga keseimbangan air tanah. Penelitian laboratorium ini menguji kuat tekan dan kuat lentur paving block dengan subtitusi semen pada limbah ban 5%,10%, Dan 15% dan penambahan serat serabut kelapa dengan perlakuan rebus 1%. .Dari penelitian ini diharapakan memperoleh paving block dengan mutu kuat tekan yang tinggi. Dan berdasarkan hasil pengujian yang diperoleh ternyata secara prinsip ternyata subtitusi limbah ban dan penambahan serat kelapa dengan perlakuan rebus terhadap campuran paving block memberikan nilai yang significant secara bertahap hingga di 28 hari terhadap penambahan kuat tekan dan kuat lentur paving block, malah sebagian campuran memberikan kecenderungan penurunan kuat tekan dibandingkan dengan kuat tekan paving block standar sebagai pembanding. Untuk variasi campuran Limbah ban 15% kuat tekan rata-rata maksimum di 28 hari hanya diperoleh sebesar 310,5 kg/cm2 dan untuk kuat lentur 6,04 kg/cm2 pada subtitusi semen pada limbah ban dengan persentase penambahan serat 15%. Sedangkan Untuk variasi campuran Limbah ban 5% dan penambahan serat serabut kelapa perlakuan rebus1% mengalami kekuatan tekan rata-rata maksimum hanya diperoleh sebesar 187,1 kg/cm2 dan untuk kuat lentur 8,22 kg/cm2.

Keywords: paving block, limbah ban, serat serabut kelapa kuat tekan, kuat lentur.

ABSTRACT

Generally paving blocks are used for pavement, pedestrian and sidewalks. Besides that, it can also be used in special areas such as container port areas, parking lots, open areas and industrial areas. The use of paving blocks really supports go green which has been proclaimed nationally/internationally, because the absorption of water through the installation of paving blocks can maintain groundwater balance. This laboratory study tested the compressive strength and flexural strength of paving blocks with cement substitution in 5%, 10%, and 15% tire waste and the addition of coconut fiber with 1% boiling treatment. From this research it is expected to obtain paving blocks with high compressive strength. And based on the test results obtained, it turns out that in principle it turns out that the substitution of tire waste and the addition of coconut fiber by boiling treatment of the paving block mixture gives a significant value gradually up to 28 days for the addition of compressive strength and flexural strength of paving blocks, instead some of the mixture gives a decreasing trend compressive strength compared to standard paving block compressive strength as a comparison. For a mixture of 15% tire waste, the maximum average compressive strength in 28 days was only 310.5 kg/cm2 and for flexural strength 6.04 kg/cm2 in cement substitution in tire waste with a percentage of 15% fiber addition. Whereas for variations in the mixture of 5% tire waste and the addition of 1% boiled coconut fiber fiber, the maximum average compressive strength was only 187,1 kg/cm2 and for flexural strength 8.22 kg/cm2.

Keywords: paving blocks, tire waste, compressive strength of coconut fiber, flexural streng.