

ABSTRAK

UJI KUAT TEKAN *PAVING BLOCK* MENGGUNAKAN CAMPURAN TANAH DAN KAPUR DENGAN ALAT PEMADAT MODIFIKASI

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Paving block banyak digunakan masyarakat sebagai konstruksi bangunan, khususnya untuk perkerasan jalan lingkungan, pekarangan, trotoar, tempat parkir, dan lain-lain. Penggunaan material penyusun utama *paving block* seperti semen dan pasir relatif mahal. Maka pada penelitian ini akan memberikan alternatif lain dengan menggunakan campuran tanah dan kapur.

Sampel tanah yang diuji berasal dari Kota Baru, Lampung Selatan, dengan variasi kadar campuran yang digunakan yaitu 0%, 5%, 10%, 15%, dan 20% dan waktu pemeraman selama 14 hari, serta dengan perlakuan tanpa pembakaran dan dengan pembakaran yang kemudian akan dilakukan uji kuat tekan dan daya serap air.

Hasil penelitian menunjukkan bahwa nilai kuat tekan paling optimum terjadi pada campuran 15% dan terjadi penurunan pada campuran 20%. Penambahan persentase kapur $\leq 15\%$ mengakibatkan penambahan kuat tekan *paving block*, sedangkan penambahan persentase kapur 20% mengakibatkan penurunan kuat tekan *paving block*. Nilai kuat tekan tanpa pembakaran masih belum memenuhi spesifikasi SNI 03-0691-1996, sedangkan *paving blok* dengan pembakaran dengan kadar kapur 15% sudah masuk dalam klasifikasi mutu D. Nilai uji daya serap air belum memenuhi spesifikasi dari *paving block* SNI 03-0691-1996 yaitu berkisar 3%-10%.

Kata kunci: Paving block, kapur, kuat tekan, daya serap air

ABSTRACT

COMPRESSIVE STRENGTH TEST OF PAVING BLOCKS BY USING A MIXTURE OF SOIL AND LIME WITH MODIFICATION COMPACTOR

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Paving blocks are widely used as a public building construction, especially for paving roads, yards, sidewalks, parking lots, etc. The use of main materials such as cement and sand is relatively expensive. So this study will provide another alternative by using a mixture of soil and lime.

Soil samples tested were from Kota Baru, South Lampung, with variations in the value of the mixture used are 0%, 5%, 10%, 15%, and 20% and the curing time is 14 days, as well as with and without burning treatment which will then the compressive strength and water absorption will be tested.

The results showed that the compressive strength occurs at the most optimal mixture of 15% and a decline in a mixture of 20%. The addition of lime percentage $\leq 15\%$ resulted in the addition of compressive strength of paving blocks, while the addition of lime percentage of 20% resulted in a decrease in the compressive strength of the paving blocks. The compressive strength without burning still not meet the specifications of SNI 03-0691-1996, while paving blocks with burning the lime content of 15% is already included in the classification of the quality of D. Water absorption test values not meet the specifications of paving blocks in SNI 03-0691-1996 which ranges from 3% - 10%.

Keywords: Paving blocks, lime, compressive strength, water absorption