

ABSTRAK

Penelitian ini bertujuan untuk mengetahui dan menganalisis pengaruh serbuk kapur terhadap sifat fisik dan mekanis *paving block*. Tanah yang dipakai berasal dari Gading Rejo, Pesawaran. Penelitian ini menggunakan campuran serbuk kapur 10% dan 20% sebagai pengganti semen. Benda uji yang digunakan berbentuk persegi panjang dimensi 20 x 10 x 6 cm, dan balok 5 x 5 x 6 cm. Pengujian daya serap air, beban kejut, kuat tekan dilakukan setelah dilakukan proses pemanasan dengan oven pada suhu 100°C, 125°C, 150°C selama 120 menit, 100 menit, 60 menit. Hasil pengujian dari penelitian ini menunjukkan bahwa, pada penambahan 10% serbuk kapur daya serap air *paving block* 27,653%, beban kejut dengan suhu 125°C dan waktu 100 menit sebesar 105,95 joule, dan kuat tekan tertinggi pada suhu 100°C waktu 120 menit sebesar 32,351 Kg/cm². Pada campuran 20% serbuk kapur terjadi kenaikan pada daya serap air, pada kuat tekan terjadi kenaikan pada suhu 125°C waktu 100 menit sebesar 31,003 Kg/cm², dan pada beban kejut terjadi penurunan. Hasil pengujian daya serap air dan kuat tekan belum memenuhi standar paving block sesuai SNI 03-0691-1996.

Kata kunci : *Paving block*, serbuk kapur, daya serap air, beban kejut, kuat tekan.

Abstract

This research aims to determine and analyze the effect of lime powder on the physical and mechanical properties of paving blocks. The land used came from Gading Rejo, Pesawaran. This research uses a mixture of 10% and 20% lime powder as a cement substitute. The test objects used were rectangular with dimensions 20 x 10 x 6 cm, and blocks 5 x 5 x 6 cm. Tests for water absorption capacity, shock load, compressive strength were carried out after the heating process was carried out in an oven at a temperature of 100°C, 125°C, 150°C for 120 minutes, 100 minutes, 60 minutes. The test results from this research show that, with the addition of 10% lime powder, the water absorption capacity of paving blocks is 27.653%, the shock load at a temperature of 125°C and a time of 100 minutes is 105.95 joules, and the highest compressive strength at a temperature of 100°C for a time of 120 minutes of 32.351 Kg/cm². In a mixture of 20% lime powder there was an increase in water absorption capacity, in compressive strength there was an increase at a temperature of 125°C for 100 minutes amounting to 31.003 Kg/cm², and in the shock load there was a decrease. The test results for water absorption capacity and compressive strength do not meet paving block standards according to SNI 03-0691-1996.

Key words: Paving block, lime powder, water absorption capacity, shock load, compressive strength.