

ABSTRAK

ISTIQAHAH QAMARIAH GIANIKA. 2021. *Pengaruh Pemanfaatan Limbah Kaca Dan Abu Daun Bambu Terhadap Kuat Tekan Serta Penyerapan Paving Block Sebagai Produk Ramah Lingkungan.* Skripsi, Prodi Teknik Sipil Fakultas Teknik Universitas Wiraraja Madura. (Pembimbing : **Anita Intan Nura Diana, ST., MT.** Dan **Ir. Imam Suhadi, MM., MT.**)

Sumenep memiliki jumlah limbah kaca dari beberapa toko kaca dan limbah daun bambu yang cukup banyak. Pemberdayaan limbah dan potensi material lokal harus diupayakan penggunaannya, dimana kedua bahan tersebut mempunyai kandungan sama seperti semen.

Metode penelitian menggunakan metode *experimental* dengan persentase penambahan limbah serbuk kaca sebesar 0%, 10%, 20% dan abu daun bambu 0%, 5%, 7%. Data disajikan dalam bentuk tabel, grafik yang selanjutnya dianalisis, teknik analisis data menggunakan metode regresi linear berganda dengan *software* SPSS.

Hasil penelitian dengan bantuan *software* SPSS menunjukkan bahwa penambahan variasi limbah serbuk kaca dan abu daun bambu tidak mempunyai pengaruh yang signifikan terhadap kuat tekan dan penyerapan air *paving block*. Hasil penelitian laboratorium menunjukkan kuat tekan rata-rata maksimum sebesar 20,271 Mpa dan penyerapan air rata-rata sebesar 10,992% dengan penambahan masing-masing variasi 10% limbah serbuk kaca dan abu daun bambu, berdasar SNI-03-0691-1996 kuat tekan rata-rata *paving block* termasuk klasifikasi mutu B, sedangkan untuk penyerapan belum memenuhi syarat klasifikasi mutu penyerapan. Namun jika dilihat dari kegunaan *paving block* semakin tinggi penyerapan *paving block* semakin besar air tanah yang *terinfiltrasi* sehingga hasil penelitian ini memenuhi *paving block* dengan kuat tekan tinggi dan penyerapan tinggi.

Kata Kunci : *Paving block*, Kuat tekan, Serapan air, Limbah serbuk kaca, Abu daun bambu.

ABSTRACT

ISTIQAMAH QAMARIAH GIANIKA. 2021. *The Effect of Utilization of Glass Waste and Bamboo Leaf Ash on Compressive Strength and Absorption of Paving Block as an Environmentally Friendly Product.* Thesis, Civil Engineering Study Program, Faculty of Engineering, Wiraraja University, Madura. (Advisor: **Anita Intan Nura Diana, ST., MT. And Ir. Imam Suhadi, MM., MT.**)

Sumenep has a large amount of glass waste from several glass shops and a large amount of bamboo leaf waste. Utilization of waste and the potential of local materials should be pursued, where both materials have the same content as cement.

The research method used an experimental method with the addition percentage of glass powder waste of 0%, 10%, 20% and bamboo leaf ash 0%, 5%, 7%. Data is presented in tabular form, graphs are then analyzed, data analysis techniques using multiple linear regression method with SPSS software.

The results of the study with the help of SPSS software showed that the addition of variations of glass powder waste and bamboo leaf ash did not have a significant effect on the compressive strength and water absorption of paving blocks. The results of laboratory research show that the maximum average compressive strength is 20.271 Mpa and the average water absorption is 10.992% with the addition of each variation of 10% glass powder waste and bamboo leaf ash, based on SNI-03-0691-1996 average compressive strength. the average paving block is classified as B quality, while absorption does not meet the requirements for absorption quality classification. However, when viewed from the use of paving blocks, the higher the absorption of paving blocks, the greater the infiltration of groundwater so that the results of this study meet the paving blocks with high compressive strength and high absorption.

Keywords: Paving Block, Compressive Strength, Water Absorption, Waste Glass Powder, Bamboo Leaf Ash.