

ABSTRAK

AHMAD JAIZ AGIL. 2021. *Pengaruh Pemanfaatan Serbuk Kaca Abu Batok Kelapa Dan Kapur Hidrolis Sebagai Material Conblock Berkelanjutan.* 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 yang berada di pertokoan seperti di toko aquarium dan toko penjual kaca. abu batok kelapa dari *industry* briket dan potensi penghasil batu gamping (kapur hidrolis) yang cukup banyak. Pemberdayaan limbah dan potensi material lokal harus diupayakan penggunaannya, dimana ketiga bahan tersebut mempunyai kandungan sama seperti semen.

Metode penelitian menggunakan metode *experimental* yang dilakukan di Laboratorium Teknik Sipil Universitas Wiraraja Madura dengan persentase penambahan limbah abu batok kelapa dan kapur hidrolis masing - masing sebesar 0%, 5%, 10%. Data disajikan dalam bentuk tabel, grafik gradasai agregat halus yang selanjutnya dianalisis, teknik analisis data menggunakan metode regresi linear berganda dengan bantuan *software* SPSS.

Hasil penelitian dengan bantuan *software* SPSS menunjukkan bahwa penambahan variasi limbah serbuk kaca, abu batok kelapa dan kapur hidrolis tidak mempunyai pengaruh yang signifikan terhadap kuat tekan dan penyerapan air *conblock*. Hasil penelitian laboratorium menunjukkan kuat tekan rata-rata maksimum sebesar 25,799 Mpa dan penyerapan air rata-rata sebesar 8.693% dengan penambahan masing-masing variasi 5% limbah serbuk kaca 5% abu batok kelapa 0% kapur hidrolis, berdasar SNI-03-0691-1996 kuat tekan rata-rata *conblock* termasuk klasifikasi mutu B, sedangkan untuk penyerapan memenuhi syarat klasifikasi mutu D digunakan untuk taman.

Kata Kunci : *Conblock*, Kuat tekan, Serapan air, Limbah serbuk kaca abu batok kelapa, Kapur hidrolis.

ABSTRAK

AHMAD JAIZ AGIL. 2021. *The Effect of Using Coconut Shell Ash Glass Powder and Hydraulic Lime as Sustainable Conblock Materials.* 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 in shops such as aquarium shops and glass selling shops. coconut shell ash from the briquette industry and the potential for producing limestone (hydraulic lime) is quite a lot. Utilization of waste and the potential of local materials should be pursued, where the three materials have the same content as cement.

The research method used an experimental method which was carried out at the Civil Engineering Laboratory, Wiraraja Madura University with the addition percentage of coconut shell ash and hydraulic lime, respectively, 0%, 5%, 10%. Data is presented in tabular form, fine aggregate gradation graph which is then analyzed, data analysis technique using multiple linear regression method with the help of SPSS software.

The results of the study with the help of SPSS software showed that the addition of variations of glass powder waste, coconut shell ash and hydraulic lime did not have a significant effect on the compressive strength and water absorption of the block. The results of laboratory research show the maximum average compressive strength of 25.799 Mpa and the average water absorption of 8.693% with the addition of each variation 5% glass powder waste 5% coconut shell ash 0% hydraulic lime, based on SNI-03-0691- 1996, the average compressive strength of the conblocks is classified as B quality, while for absorption, it meets the requirements of the D quality classification, which is used for gardens.

Keywords: Conblock, compressive strength, water absorption, coconut shell ash glass waste, hydraulic lime.