ABSTRAK

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Karya Tulis Ilmiah, juni 2024

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PERBEDAAN KONSENTRASI BIJIH PLASTIK BEKAS SEBAGAI BAHAN CAMPURAN PEMBUATAN *PAVING BLOCK*
xv + 41 Halaman + 10 Tabel + 6 Gambar + 5 Lampiran

Berdasarkan Badan Pusat Statistik 2022 timbulan sampah plastik mencapai 19,14% mengakibatkan pencemaran lingkungan dan gangguan kesehatan, pada tahun tersebut bencana banjir sebanyak 1,524 kejadian, berdasarkan statistik KLHK tahun 2021 penutupan lahan di Jawa Timur mencapai 74,38%, maka perlu adanya pengelolaan sampah plastik sebagai bahan campuran pembuatan *paving block*. Penelitian ini bertujuan untuk menganalisis perbedaan konsentrasi bahan campuran biji plastik bekas sebagai pembuatan *paving block.*

Jenis penelitian ini adalah penelitian eksperimen murni dengan menggunakan rancangan *post test with control design*. Variabel yang diteliti meliputi perbedaan konsentrasi bahan campuran biji plastik bekas, kuat tekan dan daya serap air terhadap *paving block* yang disesuaikan SNI 03-0691-1996. Data hasil pengujian dilakukan analisis menggunakan uji *One Way Anova* jika berdistribusi normal bila tidak menggunakan *mann whitney.*

Hasil penelitian variabel daya serap air memiliki nilai (*p value* = 0,000 < 0.05) artinya ada perbedaan signifikan dengan nilai rata – rata konsentrasi 5,2% 10,4% 15,5% yaitu 5,5%. 6,7%, 9,1% sedangkan kuat tekan memiliki nilai (*p value* = 0,000 < 0.05) artinya ada perbedaan signifikan dengan nilai rata – rata yaitu 17,4 Mpa. 11,3 Mpa dan 9,7 Mpa.

Kesimpulan penelitian ini adalah uji daya serap air dan uji kuat tekan *paving block* 28 hari dengan tiga konsentrasi yaitu 55,2% 10,4% 15,5%, adanya perbedaan dan memiliki nilai yang memenui SNI 03-0691-1996, nilai paling efektiv didapatkan dari *paving block* (PS_5A) memiliki konsentrasi 5% sebesar 5,4% untuk nilai daya serap air sedangkan kuat tekan pada *paving block* (PT_5D) memiliki konsentrasi 5% yaitu 18,5 Mpa masuk dalam SNI 03-0691-1996 mutu B digunakan sebagai lahan parkir.

Kata Kunci : *Paving block, Pemanfaatan biji plastik bekas.*
Daftar Bacaan : Jurnal dan SNI (2019-2023).

ABSTRACT

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Health Polytechnic of the Ministry of Health Surabaya
Sanitation Study Program Diploma Three Program
Scientific Paper, May 2024

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DIFFERENCES IN THE CONCENTRATION OF USED PLASTIC ORE AS A MIXTURE FOR MAKING PAVING BLOCKS
xv + 41 Pages + 10 Tables + 6 Figures + 5 Appendices

Based on the Central Statistics Agency in 2022, the generation of plastic waste reached 19.14%, resulting in environmental pollution and health problems, in that year there were 1,524 flood disasters, based on the statistics of the Ministry of Environment and Forestry in 2021, land cover in East Java reached 74.38%, so it is necessary to manage plastic waste as a mixed material for making *paving blocks*. The purpose of this study was to analyze the difference in the concentration of used plastic seed mixture materials for the manufacture of *paving blocks.*

This type of research was a purely experimental research using *a post test with control design*. The variables studied include differences in the concentration of waste plastic seed mixtures, compressive strength and water absorption against *paving blocks* adjusted to SNI 03-0691-1996. The data from the test results was analyzed using *the One Way Anova* test if it was normally distributed when not using *mann whitney.*

The results of the study showed that the water absorption variable had a value (*p value* = 0.000 < 0.05), meaning that there was a significant difference with the average value of 5,2% 10,4% 15,5% concentration, which was 5.5%. 6.7%, 9.1% while the compressive strength had a value (*p value* = 0.000 < 0.05), meaning that there was a significant difference with the average value, which was 17.4 Mpa. 11.3 Mpa and 9.7 Mpa.

This study concludes that the water absorption test and the compressive strength test *of the paving block* for 28 days with three concentrations, namely 5,2% 10,4% 15,5%, there was a difference and had a value that meets SNI 03-0691-1996, the most effective value obtained from *the paving block* (PS_5A) has a concentration of 5% of 5.4% for the value of water absorption while the compressive strength of the *paving block* (PT_5D) had a concentration of 5%, namely 18.5 Mpa, included in SNI 03-0691-1996 quality B used as a parking lot.

Keywords : Paving block, Utilization of used plastic.
Reading List : Journal and SNI (2019-2023).