PEMANFAATAN ABU BATU SEBAGAI CAMPURAN AGREGAT HALUS DENGAN PERSENTASE 40%, 50%, 60% DAN SERBUK BATA MERAH 10% TERHADAP KUAT TEKAN PAVING BLOCK

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ABSTRAK

Paving block merupakan bata beton yang menggunkan bahan baku semen portland, agregat halus dan air. Paving biasa digunakan sebagai lantai tempat parkir, jalan setapak, trotoar, dan perkerasan jalan dikompleks kompleks perumahan. Semakin berkembangnya dunia kontruksi maka perlu dilakukan peningkatan mutu, dengan cara menambahkan bahan campur. Bahan campur yang digunakan adalah abu batu sebagai bahan campuran agregat halus dengan persentase 40%, 50%, 60% dan penambahan serbuk bata merah dengan persentase 10% sebagai bahan tambah *paving block*. Metode yang digunakan yaitu metode experimental dengan menggunakan jumlah benda uji 35 Pcs yang terdiri 5 pcs sample Paving block normal, 5 pcs Paving block dengan campuran serbuk bata merah 10%, 5 pcs Paving block dengan abu batu full, 5 pcs Paving block abu batu full dan serbuk bata merah 10%, 5 pcs Paving block campuran abu batu 40% dan serbuk bata merah 10%, 5 pcs Paving block campuran abu batu 50% dan serbuk bata merah 10%, 5 pcs Paving block campuran abu batu 60% dan serbuk bata merah 10%. Hasil kuat tekan *paving block* didapatkan untuk *paving block* normal 22,87 MPa, untuk *paving block* normal tambah serbuk bata merah 10% didapat nilai kuat tekan 18,01 MPa, untuk *paving block* dengan bahan tambah abu batu 50% dan serbuk bata merah 10% di dapat nilai kuat tekan 17,42 MPa, untuk *paving block* dengan bahan tambah abu batu 60% dan serbuk bata merah 10% didapat nilai kuat tekan 18,89 MPa. Sedangkan untuk hasil pengujian nilai kuat tekan rata-rata *paving block* dengan bahan tambah abu batu 40%, 50%, 60%, dan serbuk bata merah 10% berturut-turut sebesar 18,01 MPa, 17,42 MPa, dan 18,89 MPa. Dari hasil tersebut syarat mutu *paving block* yang didapatkan dari hasil uji kuat tekan adalah mutu B. Klasifikasi pada mutu B dipergunakan untuk peralatan parkir.

Kata Kunci: abu batu, kuat tekan, mutu, paving block, serbuk bata merah.

UTILIZATION OF STONE ASH AS A MIXTURE OF FINE AGGREGATE WITH A PERCENTAGE OF 40%, 50%, 60% AND 10% RED BRICK POWDER ON COMPRESSIVE STRENGTH OF PAVING BLOCK

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ABSTRACT

Paving block is a concrete brick that uses portland cement, fine aggregate, and water as raw materials. Paving is commonly used as a floor for parking lots, walkways, sidewalks, and road pavements in residential complexes. With the development of the world of construction, it is necessary to improve quality, by adding mixed materials. The mixed material used is stone ash as a mixture of fine aggregate with a percentage of 40%, 50%, 60% and the addition of red brick powder with a percentage of 10% as an added material for paving blocks. The method used is an experimental method using the number of test objects 35 Pcs consisting of 5 pcs normal Paving block samples, 5 pcs Paving blocks with a mixture of 10% red brick powder, 5 pcs Paving blocks with full stone ash, 5 pcs Paving blocks full of stone ash. and 10% red brick powder, 5 pcs Paving blocks mixed with 40% stone ash and 10% red brick powder, 5 pcs Paving blocks mixed with 50% stone ash and 10% red brick powder, 5 pcs Paving blocks mixed with 60% stone ash and powder red brick 10%. The results of the compressive strength of paving blocks obtained for normal paving blocks are 22.87 MPa, for normal paving blocks added 10% red brick powder, the compressive strength value is 18.01 MPa, for paving blocks with 50% stone ash added and 10% red brick powder. The compressive strength value is 17.42 MPa, for paving blocks with 60% stone ash added and 10% red brick powder, the compressive strength value is 18.89 MPa. As for the test results, the average compressive strength of paving blocks with stone ash added 40%, 50%, 60%, and 10% red brick powder, respectively, is 18.01 MPa, 17.42 MPa, and 18.89 MPa. From these results the quality requirements of paving blocks obtained from the results of the compressive strength test are B quality. Classification on B quality is used for parking equipment.

Keywords: stone ash, compressive strength, quality, paving block, red brick powder.