Studi pengaruh penggunaan agregat halus daur ulang dan agregat kasar daur ulang dari limbah beton padat dengan mutu k350-k400 menggunakan admixture conplast sp 337 terhadap kuat tekan, kuat lentur dan susut pada beton = Study of using coarse and fine recycle aggregate from hardened concrete k350 k400 with conplast sp 337 admixture to compresive strength flexural strength and shrinkage of concrete

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Abstrak

Penggunaan sumber daya alam sebagai pembuat beton semakin meningkat belakangan ini sehingga menambah jumlah limbah beton. Penelitian ini akan menggunakan agregat kasar dan agregat halus daur ulang sebagai agregat pada beton. Komposisi benda uji terdiri dari 40% agregat kasar daur ulang dan 0%, 20%, 40% dan 60% agregat halus daur ulang dari limbah beton mutu K350-K400. Pengujian meliputi pengujian kuat tekan, kuat lentur, dan susut pada beton. Kuat tekan beton pada komposisi 20% agregat halus daur ulang meningkat 5,18% dari beton normal pada umur 28 hari. Kuat lentur beton dengan komposisi agregat halus daur ulang 20% memiliki nilai yang paling tinggi dibandingkan komposisi lainnya. Susut beton dengan komposisi 60% agregat halus daur ulang mempunyai nilai susut tertinggi dibandingkan dengan komposisi lainnya.

<hr>The using of natural resources to make concrete is increase nowadays that can gain the concrete waste. This study will use fine and coarse recycle aggregate as aggregate as aggregate in concrete. The composition of the test object consisting of 40% coarse recycle aggregate and 0%, 20% 40%, and 60% fine recycle aggregate from concrete waste K350-K400. Testing includes, compressive strength test, flexural strength, and shrinkage in concrete. The purpose of this study is to know the influence of coarse and fine recycle aggregate to compressive strength, flexural strength, and shrinkage in concrete and the optimum composition of the fine recycle aggregate to be used. Compressive strength of concrete with 20% recycled fine aggregate increased by 5,18% of the normal concrete at 28 days. Flexural strength of concrete with 20% recycled fine aggregate has the highest value than other composition. Shrinkage of concrete with 60% recycled fine aggregate has the highest shrinkage value compared to other composition.