# Removal of unburnt carbon and pyrite by physical separation for recycling of coal bottom ash as aggregate substitute

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ABSTRACT

In Korea, coal ash of about 5 million tons was generated and its recycling ratio was about 70% in 2005. But coal bottom has disposed by landfill mainly, while coal fly ash has recycled in various recycling field such as cement industry, civil and construction site. Coal bottom ash has heterogeneous physical properties according to its raw material, combustion conditions. And unburnt carbon, pyrite, and the chloride resulted from sea water quenched also causes problems in its recycling. In this study, based on characterization of coal bottom ash according to particle size, various physical separations such as spiral, shaking table and so on, are applied to make bottom ash homogeneous and to remove unburnt from it. As a result, separation ratio above 90% of unburnt carbon showed in coarse fraction.

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