

The Development of the optimum recycling technology of coal-ash generated from thermoelectric power plant in South Korea

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ABSTRACT

Generally, coal-ash, obtained from burning of pulverized coal, has physical properties which are similar to that of natural fine sand particle sizes and chemical properties of self-cementation. Accordingly, coal-ash would be used widely in construction materials. The objectives of this study is to recycle the coal-ash generated from the Samchonpo and Taeon thermoelectric power plant in South Korea, as artificial civil construction materials which can replace the gravel and sand challenged in a difficult situation to use.

In order to develop the optimum recycling technology of coal-ash, this study conducted various geotechnical characteristic test mixings with stabilized materials, and calculated the optimum design mixing ratio to upgrade the geotechnical engineering properties. In addition, uniaxial compression strength with the mixing ratio of stabilized material and gypsum, fly-ash and bottom-ash was carried out.

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