

### 3 - 3 Coal Ash Utilization of Hokkaido Electric Power Company

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We introduce four examples of application.

- 1) **Improvement of soft soil:** To improve trafficability of soft soil, we used fly ash using cement as an additive. In laboratory tests, we studied relationships between the addition rate of fly ash using cement as an additive and corn penetration index, and unconfined compressive strength.
  - 2) **Application for recycling the construction sludge:** Construction sludge discharged from the Tomato-Atsuma 4<sup>th</sup> power plant is mixed with fly ash to give plastic material. We recycled it at the developing land on the same site. In environmental assessment, we used a method of dissolution model by rainwater contacted with the embankment surface.
  - 3) **Foam composite lightweight solidified soil:** We substitute fly ash as an additive for cement used for lightweight embankment and slurry for narrow space. It decreases the amount of cement and thus reduces the cost.
  - 4) **CLSM:** CLSM stands for Controlled Low-Strength Material. This material is generally used in North America and it appears like slurry material. Fly ash is used to prevent from segregation and to control the strength of the material.
- **Recycling the construction sludge**

