

Reuse of Coal Ash as Civil Engineering Material

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KEYWORDS: reuse, civil engineering material, development of new applications

ABSTRACT

The volume of coal ash produced by thermal power plants has been increasing every year. Coal ash has been mainly used in cement. This paper discusses the development of new applications of coal ash as a civil engineering material. We conducted a trafficability test, a box shear test, an unconfined compression test, a flow test, a bleeding test, a frost heave test, and a CBR test on coal ash produced in thermal power plants in Hokkaido. These tests were conducted to examine applicability of coal ash as an earthfill material, soil improvement material for unsuitable soil, liquefied soil stabilization material (including form-mixed solidified soil material), and granulation material.

The test results show that coal ash which solidifies over time can be used for each of these purposes and that coal ash which does not solidify can be so used after modification. We have found that coal ash can be reused as a civil engineering material.

Submitted for consideration in the 2005 World of Coal Ash, April 11-15, 2005, Lexington, Kentucky, USA.