

Characterization and pozzolanic property of air- quenched coal bottom ash in cement-based recycling

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ABSTRACT

The pozzolanic properties of air-quenched coal bottom ash were investigated with different size fractions. The bottom ash was divided into several size fractions about below 4mesh and ground below 270mesh. And then, the pozzolanic activities with calcium hydroxide and portland cement were assessed at different ages. Their pozzolanic reaction proceeds slowly and accelerates gradually to show the consumption of calcium hydroxide of above 30% in the size fraction below 50mesh. The strength activity indexes measured on mortars at the curing time of 28days allows the use of bottom ash below 50mesh in concrete.

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