

A Study on the Possibility of Utilizing the Converter Slag as the Cement Admixture

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Abstract : Converter slag is used as a low-value product like a construction fill material and soil stabilizer unlike electric furnace slag and blast furnace slag. This study is fundamental research for utilizing the converter slag as the cement admixture. Magnetic separation was conducted for quality improvement of the converter slag, and it was classified according to into 3 types; SA: pure slag, SB: separated slag, SC: remained slag after separating. In XRF result, SB slag was Fe_2CO_3 ratio was higher, and CaO ratio was lower than SA. SC slag was Fe_2CO_3 ratio was lower, and CaO ratio was higher than SA. In compressive strength test for soil cement using SA, SB, SC as the cement admixture, SC slag was more effective in terms of 28days compressive strength than SA, SB slag. In this result, it is considered that the remained material (SC) after magnetic separation is available as the cement admixture.

Keywords : converter slag, magnetic separation, cement admixture, compressive strength

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