

Enhancing Value of Dam Dredged Sediments as a Component of a Self Compacting Concrete

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Abstract : This experimental work is a part of a long research on the valorization of the dam dredged sediments issued from Fergoug Dam (Mascara-West Algeria). These sediments have to be subjected to thermal treatment to become reactive with the cement and thus to obtain an artificial pozzolana. It is therefore a question of developing the calcined mud as substitutable material in part to the cement used in the composition of self compacting concrete. The objective of the present work is to highlight its influence on the behavior of self compacting concrete compared to that of the natural pozzolana and this, in fresh and hardened states. The study is being conducted on three SCC, the first using 20% in volume of natural pozzolana, the second with 20 % of calcined mud and the third for the sake of comparison is made with cement only. The first results showed the possibility of obtaining SCC with calcined mud complying with the AFGC recommendations having a good mechanical behavior which makes interesting its development as construction materials.

Keywords : dam, fresh state, hardened state mud, sediments, self compacting concrete, valorization

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