Incinerated sewage sludge ash as alternative binder in cement-based materials - DTU Orbit (14/05/2019)

Incinerated sewage sludge ash as alternative binder in cement-based materials: effect on mortar characteristics

Sewage sludge ash is characterized by its pozzolanic properties, as cement is. This predetermines its use in a substitution of cement and cementitious materials. Utilization of sewage sludge ash does not only decrease the consumption of cement, one of the largest cause of CO2 emissions, but also it can minimize the need of ash landfill disposal. The objective of this study is to show potential use of incinerated sewage sludge ash (ISSA), an industrial byproduct, as possible binder in cement-based materials. Chemical and mechanical characteristics are presented and compared with results obtained from previous studies. The effect of different ash substitution ratio on mechanical properties of mortar is investigated my means of compressive strength results.

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