

عنوان مقاله:

Evaluation of Economic Self Compacting Concrete Properties Class C۱۵۰

محل انتشار:

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خلاصه مقاله:

In recent years, extensive research has been conducted on durability and modeling of reinforced concrete structures behavior worldwide. In line with this, a document was compiled to elevate the strength and durability of concrete and also concrete structures all over the world to achieve sustainable development. The present study is done on the basis of different mixture plans using varying rates of cement, aggregates, micro silica, and lime stone powder. Self-Compact Concrete (SCC) can easily be used in any mold with any density, largely due to its considerable smoothness, and can create a product with a thoroughly flat surface and completely dense structure. SCC has high strength and efficiency and is totally homogeneous so that it could create economical concretes with much density. Using different mix designs with varying rates of cement, aggregates, micro silica, lime stone powder, and other common concrete additives, different samples at ۷ and ۲۸ days of age were tested and SCC concretes with compressive strength of ۱۵۰ C were produced. In all the plans, new properties of concrete such as slump flow, T₅₀, UBOX, VBOX, and JRing were examined. Given that estimating the durability and strength are among the basic necessities in planning of countries, compressive strength, water absorption, and permeability were also examined for the samples. Additionally, the microstructure of some SEM plans was also checked.

کلمات کلیدی:

Self-Compact Concrete, Compressive strength, Economical

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