

عنوان مقاله:

EFFECT OF GLASS FIBER ON PROPERTIES OF SELF CONSOLIDATING CONCRETE

محل انتشار:

اولین همایش منطقه ای مهندسی عمران (سال: 1390)

تعداد صفحات اصل مقاله: 8

نویسندگان:

S.M Hosseini - *Department of Civil Engineering ,Sistan Baluchestan University, Zahedan , Iran*

N. Nouri - *Department of Civil Engineering ,Sistan Baluchestan University, Zahedan , Iran*

M Miri - *Department of Civil Engineering ,Sistan Baluchestan University, Zahedan , Iran*

خلاصه مقاله:

The use of self-compacting concrete (SCC) with its improving production techniques is increasing every day in concrete production. However, mix design methods and testing procedures are still developing. Mix design criterions are mostly focused on the type and mixture proportions of the constituents. Adjustment of the fiber is one of the main key properties in proportioning of SCC mixtures. In this study, five cement paste mixtures were prepared containing 0, 0.1, 0.2, 1 and 2 percent of 6 mm long glass fibers (with aspect ratio of 150). The effect of fiber content on total shrinkage of the cementitious material is investigated in this research using shrinkage curves over 240 days. Besides, the rheological properties of fresh fiber reinforced cement paste are investigated by mini-slump test and the 28 days compressive and flexural strength of the mixtures are determined. Test results indicated that Synergistic effects resulting from fibers with optimum volume fraction allow to develop HFCP in which excellent mechanical properties .can be obtained without jeopardizing the flow properties

کلمات کلیدی:

self-consolidating concrete, highly flowable cement paste, shrinkage, glass fiber

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