

The Flexural Strength of Fiber-Reinforced Polymer Cement Mortars Using UM Resin

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Abstract : A Polymer Cement Mortar (PCM) has been widely used as the material of repair and restoration work for concrete structure; however a PCM usually induces an environmental pollutant. Therefore, there is a need to develop PCM which is less impact to environments. Usually, UM resin is known to be harmless to the environment. Accordingly, in this paper, the properties of the PCM using UM resin were studied. The general cement mortar and UM resin was mixed in the specified ratio. A certain percentage of PVA fibers, steel fibers and mixed fibers (PVA fiber and steel fiber) were added to enhance the flexural strength. The flexural tests were performed in order to investigate the flexural strength of each PCM. Experimental results showed that the strength of proposed PCM using UM resin is improved when they are compared with general cement mortar.

Keywords : polymer cement mortar, UM resin, compressive strength, PVA fiber, steel fiber

Conference Title : ICBB 2014 : International Conference on Bioinformatics and Biomedicine

Conference Location : Istanbul, Turkey

Conference Dates : May 22-23, 2014