

Project Title Studies on mechanical properties of mortar mix pre-vulcanized latex.

Project Credit 3

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ABSTRACT

The development of mortar mixed with prevulcanized latex for irrigation canal maintenance. The experiment was performed in a laboratory to test the properties of the mixture in terms of compressive strength, tensile strength, flexural strength and water absorption ratio of mortar mixed with rubber latex (Prevulcanized latex). To test the performance Polymer cement ratio (P/C) were mixed in different proportions of 0%, 1%, 3% and 5% by weight to prepare the solution and was further added to mortar, used to repair irrigation canal crack. Water and cement were mixed in the proportion of 0.60 (w/c) and the strength of the structure was tested after 7, 14, 28, 60 and 90 days respectively. The results indicated that the polymer cement ratio (P/C) of 1% (28 days) gives the best performance with 320 ksc. compressive strength, 26 ksc. tensile strength and 60 ksc. flexural strength. The average water absorption of the mortar with P/C mixture of 1% was 5.2%. The experiment showed that mortar mixed with P/C mixture of 1% is able to repair irrigation canal crack in order to reduce seepage loss on irrigation canal wall.

Keywords: mortar, pre-vulcanized, mechanical property, absorption

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