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REPAIR OF STRUCTURE CRACKS BY USING LATEX MODIFIED CEMENT BASED GROUTING MATERIAL

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ABSTRACT: The existing cracks in the structure are studied and proper selection of grouting material is evaluated by the test on different proportions of grout mix. The pervious concrete which has a voids similar to cracks in the structures are used in the experiment for the comparative study on proportions of grout mix injected into the voids. This research work has the aim to determine the suitable grout mix with strength and durability properties and to be used in repair of existing cracks. The pervious concrete of mix proportion of 1:3 with one part of cement and three parts of coarse aggregate are taken and specimens of cube, cylinder and prism beam are casted. And the specimens are injected by grout mix formulated with different proportions of silica fume (0%, 5%, 10% & 15%) and powder form penetron latex (0%, 5%, 10% & 15%) by weight of cement is taken. These materials provide additional properties to grout. In the test G3 mix shows higher strength in compression, split tension and flexural strength properties.

Keywords: *Pervious Concrete, Penetron Latex, Grout, Injection*