



Behaviour the Concrete Structures Under the Several Conditions

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Abstract The damaging impact of various chemicals and exposure conditions on concrete materials was investigated, especially in concrete facilities in long time of exploration. This study includes a preliminary analysis of chemically treated water in existing concrete structures, and another after the application of the method and using materials for the structures in future. For repair of existing reinforced structure, new technologies of polymer carbonated materials are used. One of the priorities was to examine the existing concrete structures by using non destructive and destructive methods. After that, based on the results of the analysis, adequate new materials are proposed for the repairs, most commonly new technology polymer carbonated materials, in order to achieve durability of structure elements in using technological processes. Behaviour of the repairing structures was tested using the in situ methods, and especially pull-of test, to verify the adhesion force between the old concrete structures and new applied layer. After the repairing, the concrete structures will be monitored to record the behaviour under the chemical treated water.

Key words: *Reinforced Concrete, Chemical Attack, Repairing, Damages.*

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