

Rehabilitation of Existing Buildings

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Abstract

The project presents rehabilitation as an alternative solution to demolishing and rebuilding for extending age, repair and strengthening of a building located in Beda Zayed area, in the western region of the UAE. Rehabilitation is the green solution that shall save time, energy and resources. Mainly, the project consists of an extensive search for rehabilitation methods. Simultaneously, intensive analysis processes progress resulting in the identification of the specific structural elements that need strengthening. Consequently, the design of the strengthening took place, subsequent to the testing of the strengthening methods to identify which method to proceed with. This whole procedure was followed by a decision making process to select an alternative, exploring to the owner the advantages and disadvantages of each solution in terms of cost and time.

In general, this project is a guide to an essential element in transferring existing buildings into sustainable green buildings.

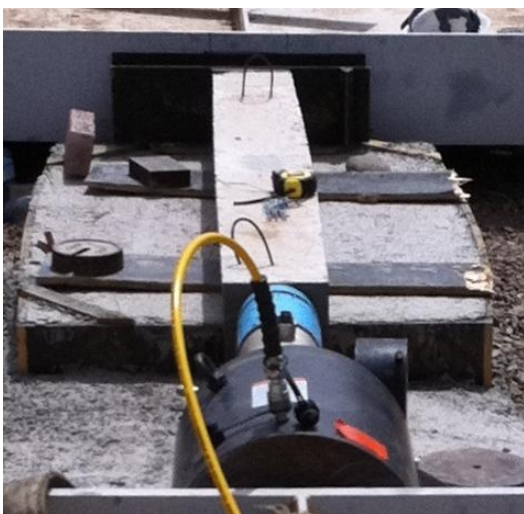


Figure 1 : Testing of a plain RC column during the testing procedure.



Figure 2 : A carbon FRP strengthened RC column after failure.