

# **STUDY ON DURABILITY OF FRP AS REINFORCEMENT MATERIAL FOR STRUCTURAL REPAIR AND STRENGTHENING AND TO PREPARE GUIDELINE AND SPECIFICATION**

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## **ABSTRACT**

Strengthening of RC beam using CFRP is fast becoming a popular technique of structural repair in Malaysia. JKR has found the need to repair and strengthen a couple of structures deficient in structural capacity. Researchers from Cawangan Pakar dan Kejuruteraan (CPKA) of JKR has gathered that future research should focus on long-term performance of FRP. Before a more comprehensive and systematic research program is yet to be established JKR has found an urgent need for a uniform guideline for design and analysis; and specifications for the installation of FRP composites. This is logical in view of the increasing number of structures reported to be in need of repair and strengthening. This need appears to have taken precedence over the study on durability.

In conducting the literature study under the appointment of CPKA, the consultant has focused mainly on producing the three documents:

- I. A report comprising literature review of case history and design manuals.
- II. A guideline for the design and analysis of CFRP-strengthened RC beam.
- III. A model specification.

The final report consists mainly of literature review of related papers and publications. This review covers a huge body of knowledge within the four chapters. The Advice Notes and Model Specifications are the results of the discussions made on the literature review.