

## **COMPRESSIVE STRENGTH MODELS OF FRP-CONFINED CONCRETE**

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### **ABSTRACT**

In the present paper, existing models on prediction of compressive strength of FRP-confined concrete are reviewed and their similarities and differences are highlighted. A large test database built from an extensive survey of existing tests on FRP-confined circular concrete specimens is then presented. Finally, a simple analytical model for FRP-confined concrete is proposed based on experimental test results of extensive studies available in the literature. An excellent agreement with test results and substantial improvement over existing models were observed. The suggested model is able to predict the compressive strength of concrete confined with any number of layers and any type of FRP composite sheets. The model can also be used in the design equations to predict axial capacity of reinforced concrete columns confined with FRP composite sheets.

### **KEYWORDS**

FRP, cylinder, column, strengthening, confinement, upgrading.