

SHEAR CAPACITY EVALUATION OF CONCRETE BEAMS WITH CFT SHEAR REINFORCEMENT

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Abstract

Development of FRP shear reinforcement was performed. Many different types of beams were tested according to the different conditions to evaluate the shear capacity. Evaluation of shear capacity for normal concrete beam, deep beam and shallow beam, flat plate, wide beam with perforated FRP plate as shear reinforcement were performed. Performance of concrete beams with different conditions such as FRP reinforced area, width and thickness of FRP plate, types and shapes of FRP plate under the different type of beams were tested. Some of the results were compared to those obtained from steel plate applied beams. It was observed that this type of shear reinforcement could be applicable very efficiently to a parking structure or bridges that does not need much fire resistant protection.