

عنوان مقاله:

Experimental and Numerical Investigation on Shear Retrofitting of RC Beams by Prefabricated UHPFRC Sheets

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خلاصه مقاله:

Different methods are used for retrofitting RC members. One of the new methods in this field is using externally bonded fiber-reinforced Concrete (FRC) sheets in order to increase RC member's shear and flexural strength. In this study, applicability of ultra-high performance fiber-reinforced concrete sheets in shear and flexural retrofitting of RC beams was investigated. In total, eight RC beams (dimensions 10×20×150 cm) with two different bending capacity and lack of shear strength were used and were tested in 3-points bending test. Of these, four were control beams and four were retrofitted with laterally bonded UHPFRC sheets. Dimensions of the sheets used for retrofitting were (3×15×126 cm). Also FEM analysis was used to model the effect of The method. the results show that this method can be well used for retrofitting RC beams. In this method the way of connecting sheets to beam's surfaces has a fundamental role in behavior of retrofitted beams

کلمات کلیدی:

Reinforced Concrete Structures; UHPFRC; Retrofitting; Laterally Bonded Sheets

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