عنوان مقاله:

SERVICEABILITY AND DUCTILITY OF HSRC BEAMS STRENGTHENED WITH CFRP PLATES

محل انتشار:

پنجمین کنفرانس بین المللی زلزله شناسی و مهندسی زلزله (سال:1386)

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خلاصه مقاله:

The use of fiber reinforced plastics (FRP) in repairing and strengthening RC beams has been researched in recent years. In particular, attaching unidirectional FRP to the tension face of RC beams has provided an increase in stiffness and load capacity of the structure. However, due to the brittle nature of unidirectional FRP, the ductility of the beam decreases. Consequently, the safety of the structure is compromised due to the reduction in ductility. The purpose of this research is to investigate the behavior of high strength reinforced concrete beams strengthened with FRP sheets. The major test variables were included the different layouts of CFRP sheets and tensile reinforcement ratio. More particularly, the change in strength and ductility of the beams as the number of FRP layers and tensile reinforcement bar ratio are altered is investigated. Six under-reinforced concrete beams were fabricated and tested to failure. With the exception of the control beam, one or four layers of CFRP were applied to the specimens.

کلمات کلیدی:

لینک ثابت نت مقاله در پایگاه سیویلیکا:

https://www.civilica.com/Paper-SEE05-SEE05_535.html