عنوان مقاله:

EFFECTS OF FRP WRAPPING ON THE BOND-SLIP BEHAVIOR OF REINFORCING BAR

محل انتشار:

سومین کنفرانس بین المللی بتن و توسعه (سال: 1388)

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خلاصه مقاله:

Fiber reinforced polymer (FRP) composites are being successfully used for strengthening of existing reinforced concrete (RC) structures because of their superior properties. Effects of wrapping with FRP on the strength and ductility of concrete members have been extensively investigated but information about effects of external confinement on the bond-slip behavior is very limited. In this paper the effect of external confinement with CFRP strips and internal confinement with transverse stirrup at beam splice test is evaluated and the results of two confinements are compared with one another. The main examined parameters include concrete cover, development/splice length, diameter of the reinforcing bar, concrete compressive strength and the amount of ordinary transverse reinforcement in the splice/development region. Test results indicated that external confinement with CFRP is more effective than internal confinement on bond strength and bond failure ductility.

کلمات کلیدی:

FRP, Strengthening, Beam splice test, Bond-slip relationship