

No.26 AFRP ロッドを埋設した RC 部材の耐衝撃性に関する実験的研究

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No.26 Experimental study on impact resistance of RC members

strengthened with near surface mounted AFRP rods

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In order to investigate the impact resistance of RC beams and slabs strengthened with near surface mounted AFRP rods, falling weight impact test was conducted. Here, two impact loading methods (iterative and single) were applied by using 300 kg steel weight. The total 12 RC beams and 9 RC slabs were used for these experiments, in which tensile rigidity of AFRP rod is varied. The results obtained from this study are as follows : 1) impact resistance of RC members can be upgraded by strengthening with near surface mounted AFRP rods ; 2) dynamic capacity ratio of strengthened RC beam with reference to non-strengthened one is almost same with its static capacity ratio ; 3) dynamic capacity ratio of the RC slab is affected to the impact loading method, and strengthening effects in case of single loading are more remarkable than those in case of iterative one ; 4) the effects are comparable to those in case increasing in slab thickness from 15 to 23 cm.

Key Words:AFRP rods, RC beam, RC slab, impact resistance

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