

ABSTRACT

題 目 Shear Creep Failures of Reinforced Concrete Beams without Shear Reinforcement

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This study aims at experimentally and analytically investigating the effects of sustained loads on the shear strengths of reinforced concrete (RC) beams. Slow loading rates (100 and 1000 times slower than a static loading rate) were selected to reveal creep effects. Although the creep effects had been observed during the experiment, the shear strength was almost constant at the occurrence of the significant diagonal cracking and increased at failure. Moreover, the numerical analysis shows that the time-dependent effect on the shear capacity seemed to be more pronounced with decreasing ratio of shear span to the effective depth of the beams.