

Development of technology for performance evaluation of reinforcement arrangement for reinforced concrete structures

[Point]

Many tie hoop or intermediate hoop reinforcing bars are arranged in reinforced concrete bridges nowadays. Along with this, construction works of arrangement of tie hoop or intermediate hoop are becoming very complicated. In this research, we aimed to develop new confinement system which enables to improve efficiency of construction works and to reduce construction cost, and proposed a fixing structure at edges of confined concrete that has good workability, and also proposed a new concrete arrangement method for wide rectangular cross-section that arranges concrete by oval interlocking bar arrangement. Then we confirmed its performance by a pulling-out test of reinforced concrete and a reversed cyclic loading test that uses bridge model.

Keywords: improvement of efficiency of construction works, tie hoop, intermediate hoop, fixing at edge, interlocking arrangement