14. Experimental Study on Structural Performance of R/C Shear Walls with L Shaped Section
- Part 2 Experiment Using Concrete Strength and Confined Area as Variables-

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Shear wall with L shaped section, which are used for structures in which center core walls and external frames are combined, were subjected to loading tests to accurately evaluate their strength and deformation properties. Besides tests conducted in the past, tests were conducted by applying load at an angle of 45 degree on two specimens, in which the column-shaped confinement steels of a shear wall with L shaped section were rationalized, and using concrete strength and axial force ratio as variables. The maximum deformation was shown at an angle of rotation of R = 1/33 against both positive and negative pressures, and the tests showed that the specimens have sufficient deformation properties and the column-shaped steels have confinement effects. Appropriate evaluation of the confinement effects of the column-shaped steels enabled bending strength to be precisely evaluated by sectional analysis using a fiber model.

Key words : shear wall with L shaped section, reinforced concrete, varied axial load, structural performance, fiber model