

15. Development of Semi-rigid Head Connection Method for Cast-in-place Concrete Piles

- Development of CAPTEN PILE Method -

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Many pile head connection methods in which pile heads are loosely connected have been recently developed and implemented to reduce stress acting on pile foundation and mitigate damage. The CAPTEN PILE method connects pile heads semi-rigidly by covering the heads with precast rings. The semi-rigid connection of pile heads facilitates the pile heads to rotate during earthquake and thus mitigate damages to the piles. A loading test was conducted to investigate the structural properties of the semi-rigid connections of the heads and verify the design model. An actual construction test showed that the method had a simple structure and is easy to execute.

Key words : cast-in-place concrete pile, pile head, semi-rigid connection, rotational characteristics, loading test