
Development of cast-in-place concrete pile with high-strength longitudinal reinforcement

- Eliminate overcrowded reinforcement of pile main bars to ensure the quality of cast-in-place concrete piles -

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This paper is a report the overcrowded reinforcement of pile main bars to ensure the quality of cast-in-place concrete piles. As a countermeasure against overcrowding cast-in-place concrete piles with high-strength longitudinal reinforcing bars of 685 N/mm² and 590 N/mm² were applied to the main bars of the pile bodies. At first, a pullout test was performed to confirm the bond performance of the high-strength longitudinal reinforcing bars and concrete in the stabilizing slurry. Next, a pullout test of reinforcing bars with lap joints was performed to confirm the mechanical performance of the lap joints between high-strength longitudinal reinforcing bars and concrete in the stabilizing slurry. Lastly, structural performance under high axial force was performed to confirm the structural performance of cast-in-place concrete piles with high-strength longitudinal reinforcement.
