2. Construction Tests for Fc150N/mm^2 Class High-Strength Concrete

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In order to verify the ease of construction of Fc150-N/mm2-class high-strength concrete, concrete placement tests using buckets and pumping tests were conducted. As a result of concrete placement by buckets, it was verified that concrete placement in a 4.0-m^3 column member was completed in approximately 25 minutes in the case where pressure hoses, which are used for absorbing slurry, pumping and other purposes, were installed at the outlet of a bucket for discharging concrete. As a result of the pumping test, it was verified that pumping was possible at a rate of 15 m^3/hr via pipeline over a vertical length of slightly over 10 m and a horizontal length of 50 m by selecting a pumping vehicle with required capacity although pressure loss was 18.5 times larger than for ordinary concrete and that pumping to sections at low levels where Fc150-N/mm^2-class high-strength concrete was applied was possible. It was also verified that neither concrete placement by buckets nor pumping had any impact on fresh concrete and compressive strength.

Key words : Fc150 N/mm^2, high-strength concrete, concrete placement by buckets, pumping