

13. The Manufacturing of $F_c=115\text{N/mm}^2$ Precast Shell

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Manufacturing experiment of precast shell by centrifugal casting and casting molding was carried out as part of the development of precast shell column in proportion to design strength 100N/mm^2 class. The design strength of precast shell in proportion to the column of RC building for design strength 100N/mm^2 was made to be 115N/mm^2 . To begin with, mixing test for obtaining the specified mix of concrete which satisfies the design strength was carried out. As the result, specified mix of centrifugal casting concrete which satisfies the design strength was made to be the mixing which replaced silica fume to 16% for cement quantity at water binding material ratio 21.8%. And specified mix of casting molding concrete was made to be the mixing which replaced silica fume to 10% for cement quantity at water binding material ratio 20%. By using concrete of design strength 115N/mm^2 based on result of mixing test, production experiment of the full scale precast shell in proportion to the out frame-type style was carried out, and it was confirmed that the manufacturing by centrifugal casting and casting molding was possible.

Key words : 100N/mm^2 class, precast shell, out frame-type style, centrifugal casting, casting molding