

**A Method of Evaluating Compressive Strength for Cast-In-Place
Concrete Focused on Drilling Fluid Density**

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The characteristic value of compressive concrete strength in design of cast-in place piles, caisson type piles and diaphragm wall foundations is the specified concrete strength multiplied by the reduction factor β in railway structures. The β was decided by the construction conditions, which were poor and those without the concrete compaction compared with the concrete placement on the ground. In this study we proposed a newly reduction factor based on the drilling fluid densities, which were surveyed by pile construction methods in the fields.