

## On the Creep of Concrete Structures

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**Abstract :** Analysis of deferred deformations of concrete under sustained load shows that the creep has a leading role on deferred deformations of concrete structures. Knowledge of the creep characteristics of concrete is a Necessary starting point in the design of structures for crack control. Such knowledge will enable the designer to estimate the probable deformation in pre-stressed concrete or reinforced and the appropriate steps can be taken in design to accommodate this movement. In this study, we propose a prediction model that involves the acting principal parameters on the deferred behaviour of concrete structures. For the estimation of the model parameters Levenberg-Marquardt method has proven very satisfactory. A confrontation between the experimental results and the predictions of models designed shows that it is well suited to describe the evolution of the creep of concrete structures.

**Keywords :** concrete structure, creep, modelling, prediction

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