

## Assessment of the Service Life Design Model Proposed by fib for the Persian Gulf Region

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### Abstract

One of the major causes of deterioration of coastal reinforced concrete (RC) structures is the chloride-induced corrosion. Therefore, durability based design of RC structures has gained great significance in recent decades and various mathematical models have been proposed. One of the best models was proposed by fib in 2006. The effect of environmental conditions on the prediction of the models is one of the most important issues. Hence, regional investigations are necessary. The Persian Gulf is one of the most marine aggressive regions of the world due to its high temperature and humidity and the Chloride ion in its water. In this study, the fib model performance was evaluated by field experiments on some marine RC structures located in this region. Then, the model was modified for applying for this environment.

Keywords: Concrete, Durability, Fib model, Probabilistic model, Marine environment.

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