

Assessment of service lives of R.C. structures subjected to chloride-induced rebar corrosion

Shamsad Ahmad and B. Bhattacharjee

Journal of Structural Engineering, Chennai (India), Vol. 23, No. 4, January (1997), pp. 177-182

Abstract:

A study has been made to assess the durability of Reinforced Concrete (RC) structures against the damage of cover concrete by chloride-induced rebar corrosion. The service lives of concrete beam specimens with different chloride contents have been estimated by using the measured values of corrosion rate of rebar in various life prediction models currently available in the literature. The suitability and shortcomings of such life prediction models have been discussed. The purpose of this study is two fold: (i) to observe the effect of chloride on the service lives of RC structures, and (ii) to investigate the suitability of various models available for prediction of service lives of the RC structures.