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## Assessment of Loss in Durability of Structures by NDT Methods

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### Abstract

The deterioration of concrete structures is a major problem in many countries throughout the world. It is obviously not possible to conduct load tests in an occupied structure to arrive at the quality of the concrete or to evaluate its performance. Many times it may not be really necessary to carry out load testing even if possible. Apart from the time & cost involved, load tests are carried out only on a limited number of elements. This cannot give relative comparisons between the quality of concrete at different locations in the structure. Furthermore load tests can give indication only about the strength parameter of the concrete & remain silent on the durability aspects.

This has prompted the use of methods for predicting the service life of both the existing & new structures by assessing the quality of concrete & measuring other properties that govern the durability. In this paper using a range of Non-destructive Test (NDT) methods an attempt has been made to determine the loss in durability in existing structures.

**KEYWORDS:** Concrete; durability; deterioration; NDT; steel; corrosion; resistivity; carbonation, cover concrete; chlorides