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Need for Non-Destructive Testing (NDT) of Concrete and Various Nd Tests

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Abstract

Even though concrete is one of the most widely used construction material, the manner in which it is presently prepared & used to form structures, leaves many a things to be desired. This may mostly be attributed to lack of proper quality control & supervision during the course of construction. Often safety & durability of structures are given the go-by by permitting poor quality of construction. When one builds a structure, it has to perform satisfactorily over the reasonably expected life.

At present the test used mainly as a basis of quality control is compression testing of cubes & it represents the potential strength of the concrete used. The main parameters determining the quality of concrete are its composition, compaction & curing. At the most it can be ensured that the composition of concrete going into the cubes & that going into the structure is the same; there may be some scope of differences in this case also. However, the methods of compaction & curing may be & usually are different for the cubes & the structural members. This is why the results obtained on cubes may not truly represent the quality of concrete in the structure.

This paper deals with different types of Non-destructive Tests used for concrete testing.