

**Evaluation of the degree of assurance in quality in the supply of ready mixed concrete based on test results of concrete cubes**

N N W Dolawatta\* and N B M Ranatunge

*Building Materials Division of National Building Research Organization, 99/1 Jawatta Road, Colombo 5*

A study was carried out on the concrete cubes supplied by four concrete producing companies in Sri Lanka to verify the quality assurance provided. In this study, standard deviation and target mean strength were identified as the main parameters, which affect the quality assurance level of a concrete mix produced.

Main inferences drawn from the study were, that,

- the standard deviations were within the limit which will provide adequate quality assurance on strength of concrete at 95 percent confidence level.
- in most of the cases the process control was high and it was possible to reduce the target mean strength (and thereby improve the profit margin) while still providing adequate quality assurance.

A supplementary study showed that the number of unusual failures of test cubes (during the test) were observed to be independent of the percentage of dimensionally defective cubes and also process control techniques of large-scale companies were better than that of the small-scale companies.

[nabro@slt.lk](mailto:nabro@slt.lk)

Tel: 011 2588946

Ext: 3584

Ext: 233