reverence, but in the hands of those who have got to know it these difficulties are often no more than one would expect to find if one looked at the cube test, for example, with the same critical eye as has been used to inspect this new toy. The technique has been applied to comparing doubtful and acceptable units, to measure variation in quality within a unit, to supplement destructive tests on precast units, and to assess the equivalent compressive strength or Young's modulus in a structure by comparing tests on specimens made from the same concrete.

The advantage of the electro-dynamic test is that a recognized property of the concrete is measured directly; however, the test can only be carried out on specially made specimens, and it is therefore virtually restricted to research, although it has been used as a control test for concrete produced for a dam. Within these limitations it has the advantage that it is less sensitive than the ultrasonic test to the surface characteristics of the concrete and is therefore particularly useful in tests to observe the deterioration of concrete under adverse conditions.

In investigations to determine the behaviour of concrete under adverse conditions non-destructive tests are very much more useful than destructive tests since the progress of a single specimen can be followed, thus eliminating the variation between the specimens. The number of specimens required in such an investigation will also thereby be reduced.

There is little doubt that these new techniques provide us with two more valuable tools for research on concrete. Their development for site use is still in its infancy, but some progress has been made. It may not be too wild a dream to suggest that the routine non-destructive testing of the concrete in a structure—under controlled conditions, as with all testing—will become a common practice.

ERRATA

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p. 62. Equation (6) should read: $\mu_2 = \frac{1}{2R}\left(\frac{f_L}{f_T}\right)^2 - 1$

p. 101, col. 1, line 21. For " thickness ratio " read " Poisson's ratio "