Influence of specimen geometry upon weight change and shrinkage of air-dried concrete specimens*

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CORRIGENDA

On page 71, in the third line from the bottom of the first column and on the scale for DRYING PERIOD in Figure 2:

for days read years

It is regretted that certain equations were misplaced in the Conclusions on page 79. This section of the paper should read as follows.

Conclusions

(1) For the particular plain concretes tested, it was found that:

- (a) at all drying periods, weight change decreases markedly with increasing specimen size, increasing curing period and decreasing water/cement ratio;
- (b) weight change, $W_0 - W$, can be expressed approximately in terms of drying period, t , by the equation

$$\frac{W_0 - W}{W_0} = a [\log_{10}(t + 1)]^b$$

where a and b are functions of specimen 'size', curing period and water/cement ratio;

- (c) the shrinkage-drying-period curves are approximately independent of curing period and water/cement ratio;

- (d) most of the observed shrinkage curves are approximately fitted by the function

$$S = f_4 \left[\left(\frac{A}{V} \right) t \right]$$

where A is the exposed surface area and V is the specimen volume;

- (e) simulation of the shrinkage-weight-change behaviour of a large concrete section may be approximately achieved by curing a small specimen of concrete for about 112 days.
- (2) The observed shrinkage curves obtained by Hansen and Mattock⁽¹⁾ are approximately fitted by

$$S = f_2 \left[\left(\frac{A}{V} \right)^2 t \right]$$

- (3) The observed shrinkage curves obtained by L'Hermite and Mamillan⁽²⁾ are approximately fitted by

$$S = f_3 \left[\left(\frac{A}{V} \right)^n t \right]$$

where n is approximately 1.3 and 1.5 for the two sets of data obtained by L'Hermite and Mamillan.

- (4) It follows from conclusions 1(d), 2 and 3 that ultimate shrinkage is broadly independent of specimen size.

*Pages 70 to 80 of MCR 99