AUTHOR'S CLOSURE

The author concurs that the theoretical development presented is only directly applicable to an infinite plate and that some liberties are taken in the application of the results to plates of finite dimensions. But this is common practice in engineering applications.

Comment 1

The numerical results for Figs 3–5 do indeed include the correction factor of 1.95 to account for the closeness of the boundaries. The factor was inadvertently misquoted in the footnote of p. 511. That is $\tilde{\Lambda} = 1.95\Lambda$. In order to double check our numerical results, we wrote an independent program and the results for $\eta = 3$ and $\eta = 1$, for example, are shown in Figs R1 and R2, respectively.

The following expression was computed first

$$\frac{K_b}{\sigma_b\sqrt{c}} = \sum_{v=1}^{N} \left(\frac{m}{\sigma_b}\right) A_v^{(0)}(\beta_v h)\left\{\left(\frac{m+2}{m}\right)\cos(\beta_v h)\sin(\beta_v h\zeta)\right.$$

$$\left. + \beta_v h \sin(\beta_v h)\sin(\beta_v h\zeta) + \beta_v h\zeta \cos(\beta_v h)\cos(\beta_v h\zeta)\right\}$$

and the results at $\zeta = 0.2$ were used then to evaluate the constant C_0. It may also be noted that only a small number of terms were required to obtain the accuracy shown in Figs R1 and R2.

Comment 2

Sheet 1.1.2 of Rooke and Cartwright (1974) is not applicable in this case because the moment is in the direction of the z-axis.

Comment 3

The comparisons made in the paper were for $\eta = 3$, 1, 0.25, respectively. However, because the author in his text had not used the symbol η, a last minute change resulted in the figures being mislabeled as c/h rather than h/c.

The author does not agree with the remaining comment. The same major 3-D correction effects will appear in the case of an infinite plate as well as in the case of a finite plate (provided that one stays away from the boundary layer). Moreover, the bending solution
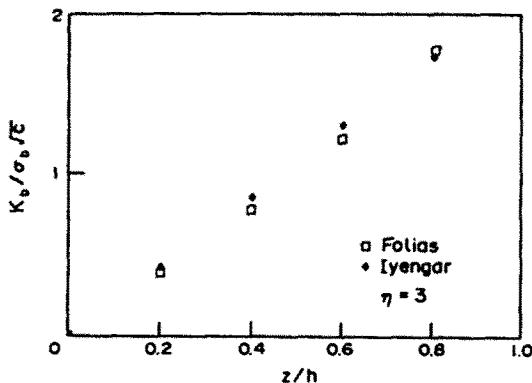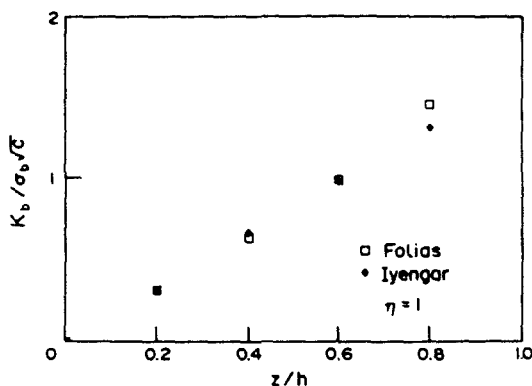

Fig. R1.

Fig. R2.

is represented by the odd function of the general solution (see Folias, 1990), which in the middle of the plate is the integral of the stretching solution with respect to z (Folias, 1975).

The author would like to thank Dr Iyengar for bringing to his attention the above oversights and apologizes to the readers for any inconvenience. Perhaps it may be appropriate here to note that although the author could have actually pushed the solution analytically as well as numerically further (Folias, 1986, 1989; Penado and Folias, 1989; Folias and Wang, 1990), he believed that he should not compete with the paper by Iyengar et al. (1988). However, as was noted in the paper, the contents of this work were actually carried out in 1975 but the reviewers at that time did not fully appreciate the contribution of the work, and, as a result, it was circulated as a technical report.

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