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Letter to the Editor

# Comments on "Prediction of fundamental frequency of initially in-plane-loaded moderately thick circular plates"

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The authors are to be congratulated for their very useful and practical results described in their study [1] which will be welcomed by designers. On the other hand, regarding the use and accuracy of their Eq. (3),

$$\frac{\lambda}{\lambda_b} + \frac{\lambda_f}{\lambda_{f0}} = 1,$$

the authors do not discuss the effect of the Poisson ratio ($\nu$). For $t/a = 0.001$ they apparently use the value $\nu = 0.30$ and presumably they have used this value for different values of $t/a$.

They mention an error of 4% for $t/a = 0.2$ and an initial load parameter equal to 0.8, obtained in their numerical experiments.

The writers feel that it would be extremely useful to mention the error for different values of the Poisson ratio since for $\nu$ varying between 0 and 0.50, the squared fundamental frequency coefficient varies between $(4.44361)^2 \cong 19.75$ and $(5.21265)^2 \cong 27.17$ [2], while the buckling parameter varies between 3.39 and 4.69 [3] for a thin plate, say $t/a = 0.001$. Probably, the variation between both mechanical parameters is larger when dealing with moderately thick plates. It is possible that these effects will influence the accuracy of Eq. (3).

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## References

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