CORRECTION

Correction to: The effect of residual stress on the stability of a circular cylindrical tube

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In this note we wish to correct an error in our paper ‘The effect of residual stress on the stability of a circular cylindrical tube’, which appeared in the Journal of Engineering Mathematics 127, 9 (2021). The code used in the computation of Figs. 7 and 8 in [1] had a small error in computing the values of $\bar{\nu}$ and $\bar{a}$ for which bifurcation is possible. This affected the accuracy of the figures, which are replaced with Fig. 1 herein. The difference is not noticeable for a thin walled tube with $\bar{B} = 1.1$, but becomes more evident with increasing wall thickness. The panels in the first and second columns of Fig. 1 correspond to Figs. 7 and 8 in [1], respectively.

The discussion of the results in [1] remains largely valid except that now there are no bifurcation curves in the region where $\bar{a} \geq 1$. Figure 1 shows that all bifurcation curves in the strongly elliptic region are in the region defined by $\bar{a} < 1$, which is consistent with the situation where there is no residual stress [2]. In particular, within the strongly elliptic region bifurcation for an unloaded cylinder is not possible.

We also clarify that Eqs. (75) and (76) in [1] show the explicit forms of the first derivative of α and the first and second derivatives of γ for the case $\kappa = 0$ only. The corresponding expressions for $\bar{\kappa} \neq 0$ were not included, but are easily obtained.

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Fig. 1 Plots of $\bar{\nu}$ versus $\bar{a}$ for which bifurcation is possible for $\lambda_z = 1$. The mode numbers n are indicated in each panel by their adjacent numerical values. The panels **a**, **c**, **e** in the left column correspond to Fig. 7 in [1], with $\kappa = 0$, and panels **b**, **d**, **f** in the right column correspond to Fig. 8 in [1], with $\kappa = 0.5$. Panels **a** and **b** are for $\bar{B} = 1.1$, **c** and **d** for $\bar{B} = 1.2$, **e** and **f** for $\bar{B} = 1.5$. For $\kappa = 0$ the region of strong ellipticity lies between the two horizontal red lines, while for $\kappa = 0.5$ the region is between the two red curves

References

1. Dorfmann L, Ogden RW (2021) The effect of residual stress on the stability of a circular cylindrical tube. *J Eng Math* 127:9
2. Haughton DM, Ogden RW (1979) Bifurcation of inflated circular cylinders of elastic material under axial loading—II. Exact theory for thick-walled tubes. *J Mech Phys Solids* 27:489–512

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