Erratum

Erratum to “Anomalous Dispersion of the S_1 Lamb Mode”

Faiz Ahmad and Takasar Hussain

School of Natural Sciences, National University of Sciences and Technology, Sector H-12, Islamabad 44000, Pakistan

Correspondence should be addressed to Takasar Hussain; htakasar@yahoo.com

Received 9 December 2013; Accepted 23 December 2013; Published 4 February 2014

Copyright © 2014 F. Ahmad and T. Hussain. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Recently, the present authors examined anomalous dispersion of the Lamb modes in isotropic plates as shown in their previous paper, by finding the slope of each mode first at its point of inception and secondly at a point far removed from it. If the slopes at two points differ in sign, it will indicate that a zero group velocity point occurs between them. However, Prada [1] has pointed out that analytical reasoning about the anomalous nature of modes has already been given by Mindlin in [2], where he has calculated the curvature of the modes in the k - ω plane, where k and ω , respectively, denote the wave number and frequency of the wave. Shuvalov and Poncelet [3] explained this fact by looking at the sign of the first coefficient in the Taylor series for $\omega_n(k) - \omega_n(0)$.

The statement “In all isotropic materials with $\kappa \neq 2$ ($\nu \neq 1/3$), only the S_1 mode has this “anomalous behavior” and other modes behave normally,” which appears in Section 1 of the paper should be replaced by “In all isotropic materials with $\kappa \neq 2$ ($\nu \neq 1/3$), the S_1 mode always has this anomalous behavior.”

The paper offers an alternative and somewhat simpler, treatment of the anomalous behavior of Lamb modes.

References

- [1] C. Prada, Private Communication.
- [2] R. D. Mindlin, “Monograph,” in *An Introduction to the Mathematical Theory of Vibrations of Elastic Plates*, J. Yang, Ed., Sec. 2.11, U.S. Army Signal Corps Eng. Lab., Ft Monmouth, NJ, USA, 1995, World Scientific, Singapore, 2006.
- [3] A. L. Shuvalov and O. Poncelet, “On the backward Lamb waves near thickness resonances in anisotropic plates,” *International Journal of Solids and Structures*, vol. 45, no. 11-12, pp. 3430–3448, 2008.