LETTER TO THE EDITOR

COMMENTS ON "MEASUREMENT OF VIBRATIONAL POWER TRANSMISSION IN CURVED BEAMS"

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The authors are to be congratulated for their excellent experimental work reported in [1] where a methodology to measure vibrational power transmission in a curved bar is developed and applied to a mild steel structural element. A detailed knowledge of this branch of structural dynamics is also of fundamental importance from the point of view of providing an optimized layout of the position of the pipe supports in nuclear reactors, petrochemical systems, etc., as well as design parameters for the supports in order to minimize power transmission.

A comparison paper [2] provided, in a rigorous fashion, the theoretical apparatus for the experimental methodology developed in reference [1].

It is important to mention the pioneering work of L. S. D. Morley early in the 1960s in this area [3] and which was also discussed in reference [2]. In this paper, he studied the problem of propagation of free elastic waves of small amplitude in a naturally curved rod. It was assumed that the neutral axis forms a plane curve of constant radius. A Timoshenko-type equation was obtained in the case of slight curvature, deriving a simple relation with the phase velocity of flexural waves in a straight rod.

ACKNOWLEDGMENTS

REFERENCES

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