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## Dynamics of Timoshenko beams on Pasternak foundation under moving load

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**Abstract**

The response of a Timoshenko beam with uniform cross-section and infinite length supported by a generalized Pasternak-type viscoelastic foundation subjected to an arbitrary-distributed harmonic moving load is studied in this paper. Governing equations are solved using complex Fourier transformation in conjunction with the residue and convolution integral theorems. The solution is directed to compute the deflection, bending moment and shear force distribution along the beam length. A parametric study is carried out for an elliptical load distribution and influences of the load speed and frequency on the beam responses are investigated. © 2004 Elsevier Ltd. All rights reserved.

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**Engineering main heading:** Beams and girders

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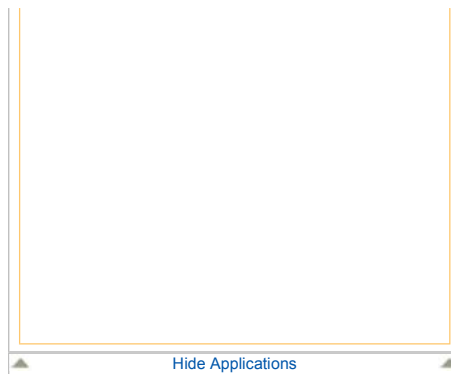
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