Abstract

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Two-Dimensional Problem for a Thick Plate under the Action of a Body Force in Two Relaxation Times.

The two-dimensional problem for a thick plate whose upper surface is subjected to a known temperature distribution, while the lower surface is laid on a rigid foundation and thermally insulated is considered within the context of the theory of thermoelasticity with two relaxation times under the action of a body force. Laplace and exponential Fourier transform techniques are used. The solution in the transformed domain is obtained by a direct approach. The inverse double transform is evaluated numerically. Numerical results are obtained and represented graphically.