

Abstract

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A Two-Dimensional Thermoelasticity Problem for Thermomechanical Shock with Two Relaxation Times

In this work a two-dimensional problem of thermoelasticity with two relaxation times is introduced. Laplace and Fourier transform techniques are used. The resulting formulation is applied to a thermomechanical shock half-space problem. The solution in the transformed domain obtained by using a direct approach. Numerical inversion of both transforms is carried out to obtain the temperature, stress and displacement distributions in the physical domain. Numerical results are represented graphically.