

Three-Dimensional Interaction in Thermoelastic Medium with Two Relaxation Times Due to Thermal Source

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Received 7 March 2016

Accepted 25 April 2016

Published 7 July 2016

The present study is concerned with the interaction in thermoelastic medium with two relaxation times due to thermal source. The finite element technique under normal mode analysis is used to solve the resulting nondimensional coupled equations. As an application of the approach, the particular type of thermal source has been considered. The components of displacement, stress and temperature change are computed numerically. The numerical stimulated results are depicted graphically for a specific model. The effect of rotation has been shown on the resulting quantities. Effect of relaxation times is shown on the resulting quantities by a comparison between the absence and presence of relaxation times.

Keywords: Three-dimensional thermoelasticity; relaxation time; finite element method.

PACS Nos.: 46.25.Hf, 47.11.Fg