WAVE PROPAGATION IN TWO-TEMPERATURE DUAL PHASE LAG MICROPOLAR THERMOELASTICITY

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ABSTRACT

In this paper, estimation is made to investigate the transient wave phenomena in micro polar thermoelastic half space subjected to inclined load. The governing equations are formulated in the context of two temperature generalized thermoelastic theory with dual phase lags. Normal mode analysis technique is employed onto the non dimensional field equations to obtain the analytical solutions. The expressions for the displacement component, stresses and temperature field are also calculated numerically for magnesium crystal like material and depicted graphically. Comparisons of the physical quantities are shown in figures to study the effect of two temperature parameters and angle of inclination. Some particular cases are also discussed in the context of the problem.