

## PROPAGATION OF PLANE WAVES IN NON LOCAL GENERALIZED THERMOELASTIC SOLID HALF SPACE

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In the present paper, the propagation of plane waves in an isotropic non local generalized thermoelastic solid half-space is studied. The governing equations are modified with the use of Lord and Shulman [1] theory of generalized thermoelasticity and are solved for plane wave solutions, which show the existence of three plane waves in x-z plane. Reflection of these plane waves from thermally insulated stress free surface is also studied to obtain a system of three non-homogeneous equations in reflection coefficients of reflected waves. For numerical computations of speed and energy ratios, a particular material is modeled as an isotropic generalized thermoelastic solid half-space. The speeds of plane waves are computed against angle of incidence. Energy ratios of various reflected waves are also computed against the angle of incidence of P and SV waves to observe the effects of non local parameter.

### REFERENCES

[1] H.Lord and Y. Shulman, A generalised dynamical theory of thermoelasticity. *Journal of Mechanics and Physics of Solids*, Vol. **15**, pp. 299-309, 1967.