عنوان مقاله:
Axisymmetric Problem of Thick Circular Plate with Heat Sources in Modified Couple Stress Theory

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نویسندگان:
R Kumar - *Department of Mathematics, Kurukshetra University , Kurukshetra, Haryana, India*

Sh Devi - *Department of Mathematics & Statistics, Himachal Pradesh University Shimla, Shimla, India*

V Sharma - *Department of Mathematics & Statistics, Himachal Pradesh University Shimla, Shimla, India*

خلاصه مقاله:
The main aim is to study the two dimensional axisymmetric problem of thick circular plate in modified couple stress theory with heat and mass diffusive sources. The thermoelastic theories with mass diffusion developed by Sherief et al. [1] and kumar and Kansal [2] have been used to investigate the problem. Laplace and Hankel transforms technique is applied to obtain the solutions of the governing equations. The displacements, stress components, temperature change and chemical potential are obtained in the transformed domain. Numerical inversion technique has been used to obtain the solutions in the physical domain. Effects of couple stress on the resulting quantities are .shown graphically. Some particular cases of interest are also deduced

کلمات کلیدی:
Modified couple stress, Axisymmetric heat sources, Heat generation, Laplace and Hankel transforms