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The influence of Thomson effect and inclined loads in an electro-magneto-thermoelastic solid with voids under Green-Naghdi theories

Elsayed M. Abd-Elaziz , Mohamed I.M. Hilal

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Highlights (for review)

- 1 The present investigation is aimed at the study of the general plane strain problem of generalized electro-magneto-thermoelastic half-space solid with voids subjected to inclined loads and Thomson effect.
2. The generalized theory of thermoelasticity in the context Green-Naghdi of type II and III is used to solve this problem.
3. The normal mode analysis technique is used to obtain the components of stress, strain, temperature, induced magnetic field and change in volume fraction field.
4. The effect of Thomson parameter on all the studied fields is very much significant.
5. Significant difference in values of the studied fields is noticed for different values of the angle of inclination.
6. The results are plotted with MATLAB software to show the effect of Thomson parameter, angle of inclination.

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