

**SOLUTION OF INVERSE THERMO ELASTIC PROBLEM OF
HEAT CONDUCTION FOR RECTANGULAR PLATE WITH THE
EFFECT OF PARTIALLY DISTRIBUTED HEAT SUPPLY AND
INTERNAL HEAT GENERATION**

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Abstract

This paper involves three dimensional inverse thermoelastic problem of heat conduction with partially distributed heat supply and due to internal heat generation to find the temperature distribution, Thermal displacements, Stress functions of the rectangular plate with given boundary conditions. For solving the heat conduction equation finite Marchi-Fasulo integral transform, finite Fourier cosine and finite Fourier sine transform technique is used. The results are obtained in the form of infinite series.

Key Words : *Inverse thermoelastic problems, Temperature distribution, Thermal displacement, Stress functions.*