

**MATHEMATICAL MODEL FOR DETERMINATION OF THERMAL
GRADIENT INSIDE OF THE FILM FLUID LUBRICANT**

Abstract. The problem of the establishing of the thermal gradient inside the film lubricant was widely taken into account during the last ten years and that for the obtaining more information about the lubrication conditions. The energy equation gives the instantaneous temperature in film lubricant and it is solved together with the viscosity and density equations. There is, finally, a highly nonlinear system of equations which can be solved by various mathematical methods.

This paper presents a mathematical model for solving the energy equation by aid of a program, made in MathConnex2000.

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