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*On an existence result for a non-isothermal, non-Newtonian strongly coupled problem with heat convection term and Tresca's law*

We study some lubrication problem describing the motion of an incompressible, non-isothermal and non-Newtonian fluid, taking into account the heat convection term. The novelty here is that fluid viscosity depends on the temperature, the velocity of the fluid, and also of the deformation tensor, but not explicitly. The boundary conditions take into account the slip phenomenon on a part of the boundary of the domain.