

# **SOPTIMAL DESIGN OF HEAT FLOW IN CALENDER SHAFT**

Summary - In the paper the analysis of a heat flow in calender shaft build of materials of different heat conduction properties was considered. The main operational problem of calenders is nonuniform temperature distribution along the working surface. The uniformness of temperature distribution may be regulated by proper distribution of material having different heat conduction coefficients. Hence, the optimal design of arrangement of materials of calender was carried out. During optimization process hybrid algorithm, consisted with evolutionary algorithm combined, in series, with Hooke-Jeeves method was used. The analysis of the state of the calendar was done with finite element method.