

NUMERICAL SIMULATION OF UNSTEADY HEAT TRANSFER IN THERMOCONTROL SYSTEM BASED ON GAS-REGULATED HEAT PIPE

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Abstract

This document contains data related to the results of the numerical calculation of steady-state heat transfer in thermocontrol system based on gas-regulated heat pipe (GRHP). The conjugate problem of heat exchange has been solved. A mathematical model which shows the GRHP with radiator in form of a solid body has been developed while the heat exchanging processes in GRHP are described by source members in reference differential equations. A check of model operation using test calculations has been performed. The results of the calculation for thermocontrol system are presented in operating mode pattern.