

COMPUTER PROGRAM FOR THE SIMULATION OF HEAT RELEASE IN THE INTERNAL COMBUSTION ENGINE CYLINDER

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ABSTRACT

The paper deals with the mathematical model and computer program for the simulation of heat release in the internal combustion engine cylinder, in the case that the heat addition is prescribed as function of crank angle and the calculation of dimensionless mass loss through the cylinder - rings system. The mathematical model includes the differential equations for the pressure, work, heat loss, mass loss and heat addition, prescribed as functions of crank angle. The computer program, written using Matlab procedures, solves the equations system on the basis of Runge-Kutta method 4/5. The paper includes in the final part, the graphic results obtained using the computer program.

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