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Global weak solutions to the equations of one-dimensional motion of a viscous heat-conducting gas with nonsmooth data.

A system of quasilinear equations describing one-dimensional motion of a viscous heat-conducting polytropic perfect gas is studied. Nonhomogeneous initial-boundary value problems are considered for the initial and boundary data as well as for free terms from the Lebesgue spaces. First, the existence of global (with respect to time and data) weak solutions is proved. Second, the uniqueness of such solutions and their strong continuous dependence on data are also proved. These results are established jointly with A. A. Amosov and are supported partially by the RFBR (grant 97-01-00214).

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