EQUATION OF STATE FOR A MIXTURE OF SiO_2 AND H_2O AT HIGH ENERGY DENSITIES IN SHOCK WAVES

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Equations of state for various substances are necessary for numerical simulations of hydrodynamic phenomena, for example, in shock waves, for closing the system of equations of motion (laws of conservation of mass, momentum and energy) [1,2]. In the present paper, a model of the equation of state for a mixture of silicon dioxide and water over a wide range of pressures and temperatures is proposed. The results of the calculation of the shock adiabats of the mixture and its components, obtained using the proposed model, are compared with experimental data at high energy densities [3].

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