

Shock Wave Structure in a Two-Components Gas Mixture.

M. A. KHIDR

Department of Mathematics, Faculty of Science, Ain Shams University - Cairo, Egypt

S. S. ELGHABATY and M. A. A. MAHMOUD

Department of Mathematics, Faculty of Science, Benha University - Cairo, Egypt

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Summary. — The nonlinear differential equations describing the problem of shock wave structure in a two-component gas mixture are reduced to a system of two coupled nonlinear differential equations. This system is solved numerically using the finite-difference method. It is found that the relative shock wave thickness of the mixture increases with the increase of the ratio between the viscosity coefficients when the ratio between the mass fractions is constant. It is also shown that the relative shock wave thickness of the mixture decreases with the increase of the ratio between the mass fractions when the ratio between the viscosity coefficients is constant.

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1. — Introduction.

Structure of shock waves in multiphase systems is one of the important practical problems in gas dynamics. In the last few years, the structure of shock waves in dusty gases has been investigated by many authors⁽¹⁻⁶⁾. The transport coefficients of viscosity have been neglected in all previous papers so that the gas

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