

Stability of Viscous Shock Wave under Periodic Perturbation for Compressible Navier-Stokes-Korteweg System

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Abstract

In this paper, we study the stability of a viscous shock wave for the isentropic Navier-Stokes-Korteweg equations under space-periodic perturbation. It is shown that if the initial perturbation around the shock and the amplitude of the shock are small, then the solution of the N-S-K equations tends to the viscous shock.

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