

Contribution Title: STEADY COMPRESSIBLE NAVIER–STOKES–
FOURIER SYSTEM
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We study steady flow of a compressible heat conducting fluid in a bounded domain $\Omega \subset R^3$. We consider either the slip boundary condition or the homogeneous Dirichlet boundary condition for the velocity and so-called Newton's boundary condition for the temperature. For the pressure law $p(\rho, \theta) \sim \rho^\gamma + \theta\rho$ with $\gamma > 7/3$ we show that under reasonable technical assumptions on the data of the problem, there is a weak solution to the above mentioned system. Moreover, for the slip boundary condition and $\gamma > 3$ the solution is such that the density $\rho \in L^\infty(\Omega)$, the velocity $\mathbf{v} \in W^{1,q}(\Omega)$ and the temperature $\theta \in W^{1,q}(\Omega)$ for any $1 \leq q < \infty$.