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Considering the full system of compressible Navier-Stokes equations (for heat conducting fluid), we show that for any solutions with finite initial physical entropy, the temperature is uniformly strictly positive for  $t \geq t_0$  for any  $t_0 > 0$ . Our solutions must verify natural entropy-like conditions on the temperature and the assumptions on the viscosity and conductivity coefficients are minimal (for instance, the solutions constructed by E. Feireisl verify all the requirements). (Received June 05, 2007)