

**Influence of a linear concentration heat source
and a quadratic density on the onset of
penetrative convections**
F. CAPONE - M. GENTILE

Abstract

The penetrative convection in a horizontal fluid layer with a quadratic equation of state for the density and an internal heating due to a linear concentration source, according to the Navier-Stokes model, is considered. The conditions guaranteeing that penetrative convection cannot occur, are obtained.