

# Using Entropy for the Point Stability in Non-Thermoconductive Fluids

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In a viscous fluid, some conditions under which thermal effects are negligible, are considered. The entropy of such fluids will then be a monotonic function on fluid trajectories. For a stationary flow it is assumed an absolute maximum for the entropy at a point among some domain in real space of flow. It is shown that:

- 1) This point is a fixed and stable point.
- 2) Streamlines near this point are closed orbits which coincide with surfaces of constant entropy.
- 3) These closed orbits also lie on spheres centered at the stable point.
- 4) The flow near the stable point is non-viscous and incompressible.