عنوان مقاله:

Onset of Benard–Marangoni Convection in a Composite Layer with Anisotropic Porous Material

نویسنده:

Y. H. Gangadharaiah - *Department of Mathematics, New Horizon College of Engineering,Bangalore-۵۶۰۱۰۳, India*

خلاصه مقاله:

The effects of thermal anisotropy and mechanical anisotropy on the onset of Bernard-Marangoni convection in composite layers with anisotropic porous material is studied. The upper fluid surface, free to atmosphere is considered to be deformable. The eigen value problem is solved using a regular perturbation technique with wave number as perturbation parameter. It is observed that both stabilizing and destabilizing factors can be enhanced thermal anisotropic parameter and mechanical anisotropic parameter so that a more precise control (suppress or augment) of thermal convective instability in a layer of fluid or porous medium is possible.

کلمات کلیدی:

Bernard, Marangoni convection, Mechanical anisotropy, Thermal anisotropy

لینک ثابت مقاله در پایگاه سیویلیکا:

https://civilica.com/doc/1383628