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Rayleigh Number in a Stability Problem for a Micropolar Fluid

Ioana Florica DRAGOMIRESCU
Department of Mathematics,
Politehnica University of Timisoara,
P-ta Regina Maria, No.1, Romania
e-mail: iona_dragomirescu@yahoo.com

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Authors

Abstract: Approximate numerical evaluations of the Rayleigh number are obtained for a stability problem of thermal convection in a heat-conducting micropolar fluid layer between two rigid boundaries [7]. The influences of all the physical parameters on the values of the Rayleigh number are studied. Also, approximate neutral curves and neutral surfaces are represented in various parameters spaces.

Key Words: Fourier series methods, micropolar fluid, thermal convection, Rayleigh number

math@tubitak.gov.tr

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