

Numerical Modeling of Turbulent Natural Convection in a Square Cavity

Authors : Mohammadreza Sedighi, Mohammad Said Saidi, Hesamoddin Salarian

Abstract : A numerical study has been performed to investigate the effect of using different turbulent models on natural convection flow field and temperature distributions in partially heated square cavity compare to benchmark. The temperature of the right vertical wall is lower than that of heater while other walls are insulated. The commercial CFD codes are used to model. Standard k-w model provided good agreement with the experimental data.

Keywords : Buoyancy, Cavity, CFD, Heat Transfer, Natural Convection, Turbulence

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