

Numerical Investigation of Heat and Energy Transfer in Traditional Balinese Buildings

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Abstrak

The heat and energy transfer around a cluster of traditional Balinese buildings is extremely complicated and difficult to determine by modeling an isolated building (eg. via symmetry conditions). Full scale models of traditional buildings have been investigated by using numerical method based on the finite element method to assess the facts of roof type on heat and energy transfer. A standard k-e model is adopted with low values of k and e combined with multi-blocks grids, in order to reduce the over-estimation of the production term of the turbulent kinetic energy in standard k-s turbulence models.