

Analysis of building materials for indoor thermal performance and thermal comfort

Abstract

In recent years, there has been an increasing interest on energy saving in building sector. Passive cooling is considered the best strategy for improving the indoor thermal conditions and comfort with lowest cost energy usage. In air-conditioned era, however, many designers have fully forgotten that the main objective of building thermal comfort is not to cool the whole space but rather the resident of the building with the least energy consumption. This investigation is about discussing some of the available passive cooling strategies based on experimental investigations. Results from this study showed that building materials affect the indoor air temperature, which in turn will affect the indoor thermal comfort. Design strategies more suitable under tropical humid climatic conditions were suggested.