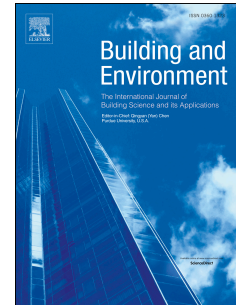


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Full-Scale Field Investigation of a Bio-Climatic House under Thailand Tropical Climate

Piyachart Thateenaranon¹, Mana Amornkitbamrung², Jongjit Hirunlabh³

Joseph Khedari⁴ and Jompob Waewsak^{5,*}

¹ Division of Energy Technology, School of Energy, Environment and Materials

² Division of Thermal Technology, School of Energy, Environment and Materials

King Mongkut's University of Technology Thonburi, Thailand

126 Pracha Uthit Road, Bang Mod, Thung Khru, Bangkok 10140, Thailand

³ Faculty of Engineering, Bangkokthonburi University

Thawiwatthana Road, Thawiwatthana, Bangkok 10170, Thailand

⁴ Faculty of Technology and Innovation, Bangkokthonburi University

Thawiwatthana Road, Thawiwatthana, Bangkok 10170, Thailand

⁵ Research Center in Energy and Environment, Thaksin University

222 Moo 2, Parpayom, Phatthalung 93210, Thailand

Abstract

The main objective of this paper is to present a full-scale field experimental investigation of a Bio-Climatic House (BCH) under the tropical climate of Thailand. The BCH included several innovative building envelope configurations, i.e., a Roof Solar Collector (RSC), a Bio-Climatic Roof (BCR), a Modified Trombe Wall (MTW), and a Glazed Solar Chimney Wall (GSCW) with the aim of maximizing natural ventilation for heat gain and indoor heat accumulation reduction as well as to improve the indoor air condition while providing appropriate natural daylighting. The field experimentation was set up to measure the indoor temperature, relative humidity, illuminance, and air velocity inside the BCH in the summer,

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