

## Heat transfer reduction using self shading strategy in energy commission building in Malaysia

### Abstract

Most office buildings have been constructed without enough strategies for appropriate use of solar energy, especially in tropical regions. Different forms of buildings and strategies were recommended. Whereas conventional building envelopes receive more solar radiation, self-shading strategy was suggested as a form of building to eliminate direct solar radiation; as a result, it causes less energy for cooling office spaces. Energy commission diamond building in Malaysia is an actual model of self-shading building. In this study, the objective is to investigate the amount of Overall Thermal Transfer Value (OTTV) reduction in energy commission diamond building. To this end, the effectiveness of self-shading strategy on OTTV is investigated through experimental and analytical approaches. Findings of this research demonstrate that the significant reduction occurs in using self-shading strategy. This strategy can be applied for forthcoming design of office buildings to reduce energy consumption as well as to meet the purpose of sustainable architecture.