THE EFFECT OF ATTIC VENTILATION ON INTERNAL CONDITIONS OF NATURALLY VENTILATED SPACES

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ABSTRACT

THE EFFECT OF ATTIC VENTILATION ON INTERNAL CONDITIONS OF NATURALLY VENTILATED SPACES

A study was conducted to observe and investigate the performance and the effectiveness of an attic ventilation system called turbine ventilator. The system is designed to provide better thermal condition to the interior space as well as the attic space of a building in hot and humid climate. It is a passive system which relies only on natural driving force of wind and natural buoyancy effect. The system is widely in Malaysia used for the purpose of improving the indoor thermal environment. The main function of the turbine ventilator is to extract the hot air a trapped as well as moist in the attic thus reducing the heat radiating effect on the occupied space. As a result, the temperature and relative humidity inside the occupied space was reduced. In this study the air temperature, relative humidity and the air movement inside the test room was measured for cases of with and without the presence of attic ventilation system. Comparison of the value in both cases gives an overall performance and effectiveness of the system.