

10. Upgrading of Control Functions of Passive Rhythmic Air-Conditioning System - Part2 Efficiency of Comfortability and Energy Conservation on Cooling and Heating -

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Passive rhythmic air-conditioning system has a function to run and stop air conditioning in predetermined intervals. With the function, the air-conditioning imparts a rhythm to temperature fluctuations and reduces energy consumption without impairing comfort. In a previous report, we discussed the possibility of controlling by temperature as well as humidity to reduce running times of air-conditioning and to save energy consumptions. To verify the effectiveness of this new controlling system, we performed experiments in each of summer and winter about comfort of subjects and energy consumption of air-conditioning. The results confirmed that new systems reduce in energy savings and do not impair comfort compared by conventional systems.

Key words: passive rhythmic air-conditioning system, temperature and humidity, PMV