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Towards Smart Building: Exploring of Indoor Microclimate Comfort Level Thermal Processes

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Abstract

Modern requirements to reduce the consumption of energy resources while maintaining comfortable conditions for people in residential, public and administrative buildings pose the task of developing new approaches to assessing the comfort of the microclimate. Currently used methods for assessing the comfort of the microclimate do not take into account the specific hazards characteristic of non-industrial premises, and for this reason, the introduction of energy-saving measures may lead to a violation of the comfort conditions in the premises of buildings. In this regard, the development of methods and methods to take into account the impact of energy-saving measures on the microclimate is an urgent task.

This research paper is devoted to solving the urgent problem – energy efficiency of buildings. We explore mathematical model of indoor microclimate thermal processes, parameters that affect to indoor microclimate, comfort microclimate serving, and represent simulation results of the developed mathematical model of thermal processes. Also, we explore how to control