

Climate Physical Processes Mathematical Modeling for Dome-Like Traditional Residential Building

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Abstract : The presented article is showing results of dynamic modeling with Matlab software of optimal automatic room climate control system for two experimental houses in Astana, one of which has circle plan and the other one has square plan. These results are showing that building geometry doesn't influence on climate system PID-controls configuring. This confirms theoretical implication that optimal automatic climate control system parameters configuring should depend on building's internal space volume, envelope heat transfer, number of people inside, supply ventilation air flow and outdoor temperature.

Keywords : climate control system, climate physics, dome-like building, mathematical modeling

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