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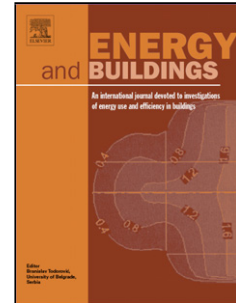
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OPTIMIZATION OF THERMAL INSULATION OF A HOUSE HEATED BY USING RADIANT PANELS

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Highlights

The optimization the thermal insulation layers of the house.

The house heated by using the radiant heating systems.

The floor, wall, ceiling, and floor-ceiling panel heating systems are investigated.

The embodied energy of the thermal insulation is taken into account.

The house with the optimal thermal insulation thickness has the highest energy saving.

***Abstract:** Radiant panels are known to be energy efficient sensible heating systems and a suitable fit for low-energy buildings. The main goal of this paper is to optimize the thermal insulation layers of house heated by using the radiant heating systems. This work is conducted to study four radiant systems: floor-heating system, wall-heating system, ceiling-heating system and newly developed floor-ceiling heating system located in a net-zero-energy house in Kragujevac, Serbia. The*

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