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IMPROVEMENT OF BUILDINGS AMBIENTAL COMFORT BY USING ENVIRONMENTAL FRIENDLY MATERIALS AND METHODS

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Abstract

Starting from the disadvantages of the polystyrene system – the most important being that they are not biodegradable and their life cycle is relatively small, up to fifteen years – there were conceived several structures for outside walls made of perforated bricks vertically disposed and filled with granular materials. In this manner the thermal resistance is improved knowing that in gaps bigger than twenty millimeters there appear convective streams which substantially decrease the isolation properties of the houses.
Another aspect that was studied deals with the improvement of indoor air temperature during summer period. This temperature can also be obtained by using two unconventional solutions. First of them is given by the utilization of geothermal energy, and the second one represents the heat absorption phenomenon through water vaporizations. Using these ideas there were considered different methods for heat transfer from an area to another by using some devices that allow fluids to pass through different aggregation forms.

Key words: comfort, exterior walls, performance, thermal system

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