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ИСПОЛЬЗОВАНИЕ СОВРЕМЕННОЙ ЭНЕРГЕТИКИ ИНДИВИДУАЛЬНОЙ КОНСТРУКЦИИ ЭТАЖЕЙ ПРИ СТРОИТЕЛЬСТВЕ ТИПОВЫХ ДОМОВ ИНДИВИДУАЛЬНО

Аннотация: В энергосбережении основное внимание следует уделить теплоаккумулирующей способности строительных конструкций.

Ключевые слова: теплолюкс пол, теплоскат, иссиқ пол, пол қопламаси

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USE OF MODERN ENERGY INDIVIDUAL FLOOR CONSTRUCTION IN THE CONSTRUCTION OF MODEL HOUSES INDIVIDUALLY

Annotation: In energy saving, the main focus should be on the heat storage capacity of building structures.

Key words: heatlux floor, heat slope, issik floor, heatmass floor

In energy saving, the main focus should be on the heat retention capacity of building structures.In analysis of the condition of individual model houses built over the past years and their designs, it was found that this issue was not well

addressed. In particular, the floors of the living rooms of residential buildings are made of lagoon, wood-chipboard (DSP), bathroom and toilet floors are made of ceramic tiles, and porch floors are made of concrete. Moisture resistance of wood chips selected for floor constructions, cold surfaces of ceramic tiles have a negative impact on the health of the occupants of the house, especially young children, and they do not meet modern requirements from an aesthetic point of view.

In addition, most of the heat used to heat the room is lost through the floor.

Currently in the construction market there are effective heated floor constructions in the system Teplolyuks, Teploskat, Teplo-dor i Teplomag, offered by various companies and used by individual customers.

In the heating of rooms, the constructions of the Teplolyuks system give good results with their comfort. Water or electricity can be used to heat the floors.

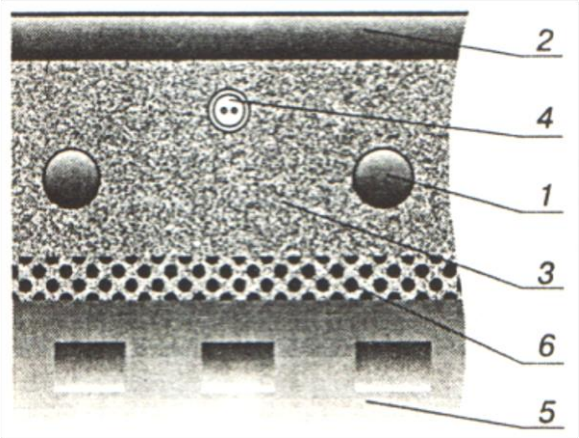

Figure 1. Heated floor construction: 1 - heating cable;

2 - coating; 3 - concrete plaster;

4 - temperature gauge 5 - base; 6 - thermal insulation

Teplolyuks is installed autonomously on the floor, it is not affected by pipe failures and interruptions in the water network, only it is possible to save heat lost due to the heating of the required room.

Materials with good thermal conductivity (ceramic tiles, natural and artificial stone materials, linoleum without a heating base, etc.) are recommended as floor coverings.

Devi manufactures Devimat thin cable glued to polypropylene mesh for underfloor heating systems. Mounted on GVL-knauf-superpol cladding plates, this cable allows the main heat flow to be directed to heat the floor cladding.

Devimat products can solve many problems related to heating using a heated floor system. The company produces single (DSVF) and double (DTVF) wire heating cables with a capacity of 100 and 150 W / m2.

Data obtained from hot flow modeling showed that heat loss from the downstream was 12%.

The rising 88% heat flux ensures that the difference between the plate surface and the room air temperature is 9-100S. For example, the floor surface temperature is +31 ... + 320S so that the living room temperature is standard 220S.

If a material with low thermal conductivity, such as parquet flooring, is used as a floor covering, the heat loss from the lower side will increase by 25%, and the floor surface temperature will drop to 300C.

By changing the floor covering, it is possible to obtain the data of heat flow shown in the table.

DSVF and DTVF cable The thermal resistance of floor structures laid on Devimat shall not exceed 0.125 m2 K / W.

Table

Characteristics of heat fluxes

т/р	Floor coverings	Heat flow distribution, %		Maximum flooring t, C
		high	past	
1	Ceramic tile 7 mm	88	12	32
2	Marble 20 mm	88	12	32

3	Vinyl tile 3 mm	86	14	31
4	Laminate 7 mm	85	15	31
5	Parquet 7 mm	79	21	30,5
6	Parquet board	75	25	30
7	Laminated parquet 15 mm	71	29	30

If the floor structure is on a cold room or balcony, a large amount of heat is lost. In this case, a material with a high moisture content of drywall or thermal insulation, for example, M 25 and $\lambda \leq 0{,}04$ polystyrene bedding is required.

The thickness of the cable heating system and the heat-insulating floor must be calculated in a complex way.

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