

MEASURES TO IMPROVE THE ENERGY EFFICIENCY OF BUILDINGS

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<i>A B S T R A C T</i>	<i>KEYWORDS</i>
Energy savings is one of the most important problems of the modern world. The improvement, convenience and quality of the premises in many ways depends on the level of thermal protection of the outer wall structure.	

Introduction:

An important part of heat energy can be supplied and used by increasing energy efficiency during the construction process, efficient hot supply systems in winter and cooling during the summer.The solution to this problem is that on the one hand, it is not enough to provide private resources, and on the other hand, the existence of extreme climatic conditions.

It is intended to be aimed at all stages of energy efficiency design: building sites are designed to accommodate the building right, to make annual project decisions in the adoption of optimal size-planning solutions, and in the full development of the project.

When placing the building on the construction site, it is necessary to focus as much as possible on the southern or nearby sides of the building. It is necessary to design the building compactly, ensuring that the outer barrier structures that correspond to the building's construction unit are as low as possible. At the boundaries that allow the compactness of the building, rational blocking accounts of building rooms will be achieved, taking into account the requirements of increasing the width of the corridor and the number of floors, natural lighting and natural ventilation. (1)

Recently, the importance of energy efficiency and energy efficiency is constantly growing not only in the Central Asian region, but also in other developed countries. The foundation of the energy and energy-efficient building can be determined by three main aspects:

- Providing climatic conditions in B;
- Maximum use of traditional and modern engineering systems;
- A systematic approach to optimizing all energy elements of a building.

It is forbidden to pay attention to the general principles of heat protection when addressing issues related to improving the energy efficiency of buildings. The QMQ 2.01.04 - 97* that operates today offers an elemental method of improving energy efficiency, This method is based on a proportional

increase in the resistance of blocking structures to heat transmission, i.e. all blocking structures of the building are divided into elements (external walls, chord intersections or roofs, sokol intersections, windows, doors, etc.) and transmit heat for each element boundary allowable coefficients will be installed.(2)

In winter, about 40% of the heat energy is spent on the outer layer of the air (street) on heat radio. Another 40% of losses from this amount fall on the wall, 20% - in the window and door openings, 20% on the roof, 20% in the ventilation and ventilation system.



It should be noted that the lack of thermal resistance of the outer barrier structures of buildings reduces the energy efficiency of buildings.

Optimizing the heat and energy impact of the external climate on the heat balance of the building.

The heat-energy impact of the external climate on the heat balance of the building can be optimized by selecting the shape of the building (parameters such as its size and direction are taken into account for buildings in the shape of rectangles), places and places of filling of light holes, filtering currents.

For example, a good choice of the direction and size of a rectangular-shaped building will reduce the impact of sunlight on the bark of the building in the warm season and therefore reduce the cost of cooling it, and in cold periods, increase the impact of sunlight on the bark of the building and reduce heating costs. Similar results are obtained by a good choice of direction and size of the building, relative to the effect of the wind on the heat balance. Periods of the year: the five coldest days, the heating period, the hottest month, the cooling period, the approximate year. In this case, the optimization of the heat and energy impact of the external climate to the heat balance of the building by choosing its shape and orientation gives its results:

1. Eng cold for five days- reduce the installation capacity of the heating system;
2. Reduce heat consumption for the first cinch period-heating;
- 3.Reduce the power ofthe air conditioning system for the hot month after the first;
4. Reduce energy consumption for the S-swallowing period-building cooling;
- 5.TReduce energy consumption for the axial year-to-year heating or cooling of the building.

In general, the heat and energy effects of the external climate for any given time can be optimised to the heat balance of the building. It is important to note that changing the shape of the building or its

size and direction to optimize the impact of the external climate on the heat balance does not require a change in the area or size of the building - they will remain.

Optimization of heat load in the room climatic system.

The task of optimizing the heat-energy load in the building's heating regime system applies to so-called optimal management tasks and takes the following contents: power consumption management $q(t)$ for heating the room, which satisfies the heat balance in the room and the corresponding initial and final heating conditions, energy consumption

$$I = \int Q(t)dt$$

has the smallest possible value.

$Q(t)$ - the solution to the given problem is called optimal control, and the corresponding trajectory of the internal air temperature is called the optimal trajectory.

It is necessary to take into account the two main principles: the complexity of the use of technology and the purpose of their use, and this is primarily due to their return. Thus, it consists of h , which improves not only the energy costs of the real whole building, but also the overall state of the energy saving industry.

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