

УДК-699.86

**Ablaeva Ugiloy Shodikulovna**

Senior lecturer of the Department of "Construction of buildings and structures",  
JizPI.

**Dossaliyev Kanat Serik ogli, assistant professor –**

PhD, associate professor, head of the department “Industrial, civil and road  
construction” South Kazakhstan University named after. M. Auezova.

**Isokjonov Kamronbek Shavkatovich**

student of group 101-20 JizPI.

## **ECO-HOUSE CONSTRUCTIONS DIFFER FROM CONVENTIONAL HOUSES**

***Abstract:** This article also provides examples of how eco-house constructions differ from ordinary houses and how they are designed. Information is provided that the main focus should be on the thermal efficiency of constructions for heat storage in Eco.*

***Key words:** Eco house, heat, inertia, greenhouse, efficiency, eco house materials, solar cells, solar collectors, economical.*

## **ОТЛИЧИЕ КОНСТРУКЦИИ ЭКОДОМА ОТ ОБЫЧНЫХ ДОМОВ**

***Аннотация:** В этой статье приведены примеры того, чем конструкции экододомов отличаются от обычных домов и как они проектируются. Приведена информация, что основное внимание следует уделить тепловой эффективности конструкций аккумуляции тепла в экологическую.*

*Ключевые слова: Экодом, тепло, инерция, теплица, эффективность, материалы экодома, солнечные батареи, солнечные коллекторы, экономичность.*

Many traditional structural solutions and materials can be used in eco-house construction. The main part of the house is its body. The main task of the housing is to provide sufficient accommodation with comfortable conditions. The housing should be mechanically strong, long-lasting and save heat in the building.

The main thing in the development and creation of decoration of Eco-house is the use of natural, ecologically pure materials for decoration. The same applies to plumbing, kitchen and other equipment. Eco-house historical solutions have their own special features, they are properly connected with special engineering equipment options and recommended internal walls (between rooms), buffer zones, mansards and other structures.

Built-in furniture is recommended, it is advisable to place cabinets along the northern walls, such placement serves to create additional areas that increase heat protection.

Eco-house housing differs from ordinary houses in that it has relatively high requirements for heat consumption. It is necessary to make the housing of the house from such materials as to reduce the amount of heat loss as much as possible and ensure that the heat accumulated in the summer (day) reaches the whole winter (night). For this, the thermal resistance of the building's barrier structures should not be less.

In order to increase the heat protection efficiency of the building, a buffer from cold rooms is installed along the perimeter of the regions: a greenhouse, a porch, a garage, a workshop, winter storages and other auxiliary rooms are designed on the south side.

A greenhouse, also known as a greenhouse, is a facility designed to grow plants under controlled conditions. It is usually made of glass or plastic and has a metal frame. A microclimate is created inside the greenhouse, which maintains optimal conditions for plant growth, such as temperature, humidity and illumination.

Greenhouses are used in agriculture to grow vegetables, fruits and flowers all year round. They are also popular with amateur gardeners who want to extend the growing season or create a tropical atmosphere for exotic species.

There are various types of greenhouses, including lean-to, gable, polygonal and domed. The choice of greenhouse type depends on climatic conditions, available space and personal preferences.

The greenhouse structure must be strong enough to withstand wind and snow loads, as well as have good ventilation to prevent overheating in hot weather.

Inside the greenhouse, plants can be installed on beds or hung on trellises. Heating, irrigation and lighting systems can be used to maintain optimal conditions inside the greenhouse.

Greenhouses play an important role in agriculture, allowing food to be grown all year round and expanding the geography of their production. They also help protect plants from adverse weather conditions and pests.

To save heat in an eco-house, the main attention should be paid to the thermal efficiency of window, door and entrance structures.

The main elements of the external installation of the eco-house of the building are shown. They include: a greenhouse on the south side, technical rooms (garage, workshop) built as buffer zones built on the north side, glazed verandas (from the west or east). Eco-house is oriented to the south, which allows maximum use of passive solar heating. On the roof (or outside the house, depending on specific conditions) solar cells, solar collectors (air and water) are placed.

Since Eco-house has buffer zones, ordinary light channels are installed in them in addition to windows to provide economical lighting. Since the heating of the house is periodic (in the sun, turning on the stove once a day), internal heat accumulators are necessary to maintain a constant temperature in the house. Accumulators collect and store excess heat, and when it is not enough, it provides heat inertia to the house and starts to emit heat.

### ***References:***

1. Аблаева, Ў. (2020). Курилиш конструкциялар фанидан ўқитишда “зинама-зина” технологияси. *Архив Научных Публикаций JSPI*.
2. Ablayeva, U., & Normatova, N. (2019). Energy saving issues in the design of modern social buildings. *Problems of Architecture and Construction*, 2(1), 59-62.
3. Sh, A. U. (2020). Technological methods of improving the durability of concrete in a dry hot climate of Uzbekistan. *Bulletin of Science and Education*, (21-3), 99.
4. Испандиярова, У. Э. К. (2020). Усиление мостовых железобетонных балок высокопрочными композиционными материалами. *European science*, (6 (55)), 63-67.
5. Испандиярова У.Э., Испандиярова У.Э., Давронов Б.А., Исаев Р.А., & Бобаджанов А.А. (2023). Роль, цель и задачи науки «механика грунтов, основания и фундаменты» в подготовке инженеров-строителей. *Экономика и социум*, (12 (115)-1), 1137-1141.
6. Джураев, У. У. (2021). Влияние минеральных добавок в агрессивной среде на прочность керамзитобетона. *Science and Education*, 2(5), 144-154.
7. Испандиярова, У. Э., угли Давронов, Б. А., Исаев, Р. А., & угли Бобаджанов, А. А. (2023). Роль, цель и задачи науки «металлические конструкции» в подготовке инженеров-строителей. *Science and Education*, 4(12), 550-556.

8. Норматова, Н. А. (2007). О СОВЕРШЕНСТВОВАНИИ ПОДГОТОВКИ ПЕДАГОГИЧЕСКИХ КАДРОВ В УСЛОВИЯХ ВСЕОБЩЕГО МЕНЕДЖМЕНТА КАЧЕСТВА.
9. Испандиярова У.Э., & Норматова Н.А. (2023). Роль, цель и задачи дисциплины «архитектура промышленных и гражданских зданий» в подготовке инженеров-строителей и общие правила проектирования. *Экономика и социум*, (4-2 (107)), 579-582.
10. Джураев, У. У. (2020). Повышение технического состояния зданий и сооружений на основе поверочного расчета. *Academy*, (11 (62)), 70-74.
11. Jumanov, A., Khudayberganova, M., Mirazimova, G., Radjabov, Y., Umarov, N., & Samatova, G. (2023). Monitoring dynamics of green spaces in Surkhandarya region based on remote sensing data of climate change. In *E3S Web of Conferences* (Vol. 401, p. 02012). EDP Sciences.