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Problems of Rural Constructions

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Abstract: This article provides information on the problems of low-rise residential buildings being built in rural areas and their solutions.

Keywords: residential and farm buildings, design institutes, basements, building materials, reinforced concrete frame, wooden frame.

At the present time, when construction is rapidly developing in the cities and district centers of our republic, the construction of residences and other farm buildings being built in remote villages is carried out with a lot of manual labor, in most cases, by craftsmen who rely on their own experience.

These buildings and structures are not designed in most special design institutes and are not built with the help of special construction organizations with a mechanized base. For this reason, builders need a specific guide that is comprehensible and covers many issues in a way that meets the requirements of modern construction standards.

The following issues should be resolved in it:

- In order to make efficient use of the space allocated for construction, it is advisable to design a compact building with 2 floors in most cases. It is necessary to place storerooms or other auxiliary rooms in the basements, and to ensure the insulation (roof of the basement) of poured reinforced concrete. On the first and second floors, it is appropriate to separate bedrooms, kitchens, children's rooms, and hotels. The area of these rooms should be determined depending on the composition of families and the number of residents. (Wedding hasham, etc.) Is becoming a tradition in wedding halls and restaurants designed for this purpose. It is known that a large part of the construction is the raising of the walls of the building. For many centuries, raw brick, raw brick with straw, guvala have been used as building materials for the wall. It is also widely used as a filler in houses made of raw brick and clay. Thin houses are widely used in mountainous and mountainous regions; most of them are single-story buildings. Such buildings have been tested for many years due to their earthquake resistance.

In recent years, the construction of sinch houses has decreased significantly, the main reason for this is not only the scarcity of local building materials, mainly poplars, but also the number of sinch builders. We have almost forgotten the technology of making poplar as a building material.

It is known from the history of the construction of our ancestors that during the preparation for the winter, a poplar that is cut only during the winter chill, until the frost sets in, the maximum amount of moisture is released into the atmosphere and winters in a dense state. For this reason, poplars are cut in the winter chill, the cut poplars are put in water (ponds) after a month. Then they are dried in the shade protected from sunlight.

The poplar made in this way was not split, and it was easy to make all kinds of patterns from

it (various boards, doors and gates, etc.).

Currently, a large number of poplars are being planted on vacant lands, along streams and ditches. If we restore the technology of its preparation, our public buildings, mosques, neighborhood assembly buildings, etc., would have a more traditional appearance.

Currently, as a practical aid for village construction, there is a need to prepare instructions in simple language, at the level that village masters can understand, in which the following practical issues should be covered:

1. How to design compact and efficient living houses and other auxiliary rooms, which are widely used in rural construction, depending on the composition and number of families?
2. Which construction materials are widely used in rural construction and are effective?
3. based on practice, it is necessary to determine the physical and mechanical properties of clay and straw bricks. Taking into account their thermal conductivity, it will be possible to determine such issues as wall thickness and room height.
4. Due to the fact that Uzbekistan is in an earthquake zone, the issue of concrete, that is, reinforced concrete or wooden buildings should be determined by analyzing the effective ones. For this, it is required to evaluate the stress-deformation states of the building and its load-bearing elements and check them for limit states. [2]

Thus, it is necessary to determine the most effective of two main options:

1. With a reinforced concrete frame, the filler is raw brick (with and without straw). It is necessary to determine the effective composition and strength of straw bricks.
2. Wooden sinch, filled with straw (with or without straw).

Which of the two options with the same memory solution is more effective is determined based on their technical and economic indicators.

It should be noted that there are great advantages of designing residential buildings with a basement. The use of basements as various utility rooms should be provided for (storage room, coal room, firewood room, even a bathroom, etc.) As for the roofs, it is advisable to build the basements and the first floor from cast iron concrete from beams with a reinforced concrete frame. In this matter, the "Building and Construction Design" department of our university has developed an effective method, the volume of concrete can be reduced by 2 or more compared to precast reinforced concrete. Problems of heat and vapor permeability are also solved using local construction materials. The second floor can be made of wood, covered with reeds or straw, and plastered with clay.

For this purpose, studies are being conducted in the department to determine the composition and thickness of the plaster.

References:

1. ШНҚ 2.08.01-19 Турар жой бинолари.
2. ШНҚ 3.03.01-98 Юк кўтарувчи ва тўсувчи конструксиялар.
3. Salomovich, T. E., & Pulatovich, M. B. (2021). Thermal Insulation Of The Foundation Walls Of Buildings And Calculation Of Its Thickness. *The American Journal of Engineering and Technology*, *3*(04), 70-78.
4. Матёкубов, Б. П. & Саидмуродова, С. М. (2022, August). Кам Сув Талабчан Боғловчи Асосидаги Вермикулитли Енгил Бетонлар Технологиясини Қўлланилиши. In *International Conferences* (Vol. 1, No. 15, Pp. 103-109).

5. Inatillayevich, G. O., & Pulatovich, M. B. Analysis of Underground Projects of Energy Efficient Low-Rise Residential Buildings Built on Highly Flooded Soilshttps. *doi. org/10.31149/ijie. v4i9, 2156*.
6. Bolikulovich, K. M., & Pulatovich, M. B. (2022). HEAT-SHIELDING QUALITIES AND METHODS FOR ASSESSING THE HEAT-SHIELDING QUALITIES OF WINDOW BLOCKS AND THEIR JUNCTION NODE WITH WALLS. *Web of Scientist: International Scientific Research Journal*, *3*(11), 829-840.
7. Matyokubov, B. P., & Saidmuradova, S. M. (2022). METHODS FOR INVESTIGATION OF THERMOPHYSICAL CHARACTERISTICS OF UNDERGROUND EXTERNAL BARRIER STRUCTURES OF BUILDINGS. *RESEARCH AND EDUCATION*, *1*(5), 49-58.
8. Turakulovna, E. M., & Pulatovich, M. B. (2023). WAYS TO INCREASE THE ENERGY EFFICIENCY OF BUILDINGS AND THEIR EXTERNAL BARRIER STRUCTURES. EURASIAN JOURNAL OF ACADEMIC RESEARCH, 3 (1), 186–191.
9. Egamova, M., & Matyokubov, B. (2023). WAYS TO INCREASE THE ENERGY EFFICIENCY OF BUILDINGS AND THEIR EXTERNAL BARRIER STRUCTURES. *Eurasian Journal of Academic Research*, *3*(1 Part 1), 186-191.
10. Nosirova, S., & Matyokubov, B. (2023). WAYS TO INCREASE THE ENERGY EFFICIENCY OF EXTERNAL BARRIER CONSTRUCTIONS OF BUILDINGS. *Евразийский журнал академических исследований*, *3*(3), 145-149.
11. Egamova, M., & Matyokubov, B. (2023). IMPROVING THE ENERGY EFFICIENCY OF THE EXTERNAL WALLS OF RESIDENTIAL BUILDINGS BEING BUILT ON THE BASIS OF A NEW MODEL PROJECT. *Евразийский журнал академических исследований*, *3*(3), 150-155.
12. Alimovna, N. S., & Pulatovich, M. B. (2023). WAYS TO INCREASE THE ENERGY EFFICIENCY OF EXTERNAL BARRIER CONSTRUCTIONS OF BUILDINGS. *Open Access Repository*, *4*(2), 182-186.
13. Turakulovna, E. M., & Pulatovich, M. B. (2023). IMPROVING THE ENERGY EFFICIENCY OF THE EXTERNAL WALLS OF RESIDENTIAL BUILDINGS BEING BUILT ON THE BASIS OF A NEW MODEL PROJECT. *Open Access Repository*, *4*(2), 187-193.
14. Pulatovich, M. B., & Muzaffarovna, S. S. (2022). METHODS FOR INVESTIGATION OF THERMOPHYSICAL CHARACTERISTICS OF UNDERGROUND EXTERNAL BARRIER STRUCTURES OF BUILDINGS. *ISSN 2181-3191 VOLUME 1, ISSUE 5 AUGUST 2022*, 202259.