AMERICAN JOURNALS
Open Access, Peer Reviewed Journals

American Journal of Technology and Applied Sciences
ISSN (E): 2832-1766| Volume 19, December, 2023

EXPLOITATION OF RESIDENTIAL BUILDINGS IN WINTER SEASON

D. Akramova,
Senior Lecturer
Namangan Engineering Construction Institute

ABSTRACT	KEYWORDS
In preparing the building for the winter season, heating measures that ensure efficient use of heat, as well as measures that envisage the efficient use of hot and cold water and electricity are of great importance.	Buildings, winter season, engineering, exploitation.

Introduction

When performing the above-mentioned works, it should be considered that most of the heat is lost in the attic rooms of the building. The practice of operating buildings in the autumn-winter season is that if the difference between the temperature in the attic rooms and the outside temperature does not exceed 20 ^{o}C, then the melting of snow does not occur, and freezing and frost do not occur.

The difference between the outside air and the air in the attic is more than 20 ^{o}C, the source of heat supply to the attic, for example, insufficient or bad thermal insulation of the attic space; It is necessary to identify pipelines, air collectors, expansion tanks, ventilation and sewage columns and other defects located in the attic. In addition, the attic may not be ventilated.

One of the following methods is recommended for improving the thermal insulation of attic partitions: Increase the thickness of the heating to the standard requirement; additional heater light expanded clay, mineral cotton, mineral fiber, etc. are recommended; it is not recommended to use an additional heavy heater, for example, a stone, without first calculating the load-bearing capacity of the attic membrane approved by the project organization; it is not possible to change to a roll waterproofing with clay plaster, because this will destroy the ventilation of the membrane. It is necessary to ventilate a standing bulk heater (once in 5 years). It should be insulated so that heat does not pass from the stairwell to the attic.

Heat insulation of pipelines and ventilation shafts should eliminate heat loss to the environment.

Inspection of the central heating and hot water supply pipelines passing through the attic is carried out by inspection. It is not allowed to have open sections and cracks in the thermal insulation. Expansion tanks, air collectors, openings of the heating system and the like must also be insulated. Sewer pipes passing through the attic should have their widened ends facing upwards so that the condensate formed in the pipes does not fall into the joints through the joints, and must be heated with a 6-th thick 7 смmineral wool or a 10-th thick 15 смwooden wrap with stones.

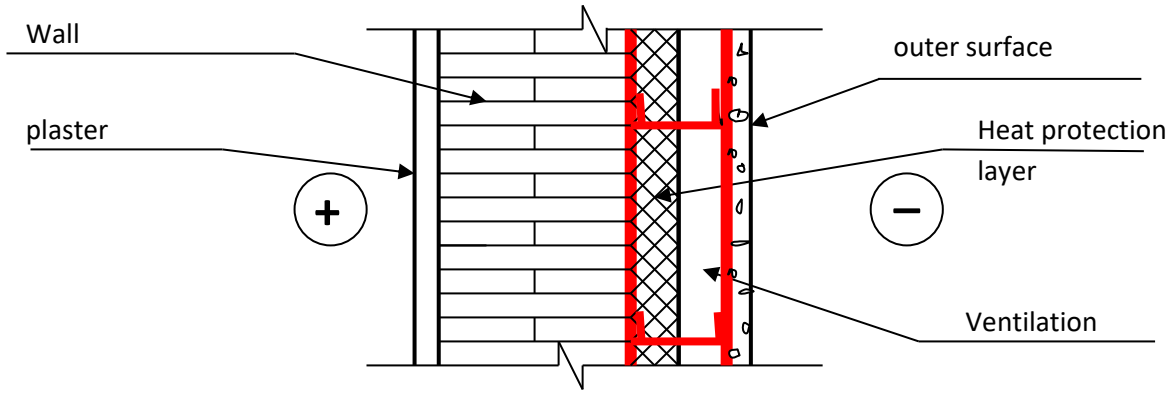

Figure 1. Construction of facade systems with ventilated air slots

If the measures listed above cannot provide the required temperature-humidity regime, then the ventilation structure of the roof should be carefully looked at. The cross-sectional area ~~of~~ hearing windows or skylights on the roof should not be less than 1/300 of the area of the attic , that is, there should be at least one hearing window or vents for each 1000 м^{2}area of the attic. 3,5 м^{2}In this case, the specified structure should provide direct ventilation of the attic room, excluding air congestion (air pockets).

Inadequate roof ventilation can lead to overcooling of rooms on upper floors and the formation of abundant condensers on ceiling surfaces, serious damping of structures and heaters. Therefore, with the appearance of spots on the ceilings of the upper floor, it is necessary to immediately check the humidity of the heater and measure the thickness of the shed. It is not allowed to reduce the cross-sectional area by closing the exhaust or suction holes of the ventilation channel grills with heaters, bricks, etc. In the winter months, it is recommended to carry out maintenance work inside the building, as well as adjustment and correction of the water conduit, sewerage and electrical supply system.

Reforms in the field of maintenance and operation of residential and public buildings are developing in Uzbekistan. I analyzed the technical maintenance of buildings , their operation , current repair systems. These systems are vital to keep the buildings in working condition, they are one of the factors that determine the living conditions of the residents in the buildings and provide them with all-round comfort. The above facilities should be taken into account during the design of the buildings, and the latest scientific achievements should be put into practice.

References

1. Рахмонов Б. и др. ТУРАР ЖОЙ БИНОЛАРИНИ ҚИШ МАВСУМИ ШАРОИТДА ЭКСПЛУАТАЦИЯ ҚИЛИШГА ТАЙЁРЛАШ //PEDAGOG. – 2022. – Т. 1. – №. 3. – С. 99-108.

2. Рахимов А. М. и др. Ускорение твердения бетона при изготовлении сборных железобетонных изделий //Conferencea. – 2022. – С. 20-22.

3. Muminov K. K. et al. Physical Processes as a Result of Concrete Concrete in Dry-hot Climate Conditions //International Journal of Human Computing Studies. – Т. 3. – №. 2. – С. 1-6.

4. Saidmamatov A. T. et al. Mathematical Model of the Optimization Problem Taking Into Account a Number of Factors //European Journal of Research Development and Sustainability. – 2021. – Т. 2. – №. 3. – С. 1-2.

5. Акрамова Д. ЭКОНОМИКО-МАТЕМАТИЧЕСКОЕ МОДЕЛИРОВАНИЕ СРОКОВ ПРОВЕДЕНИЯ РЕМОНТА И РЕКОНСТРУКЦИИ МОСТОВ //PEDAGOG. – 2022. – Т. 5. – №. 7. – С. 415-423.
6. Жураев Б. Г., Акрамова Д. Г. ОСОБЕННОСТИ ПРОЕКТИРОВАНИЯ ЭНЕРГОЭФФЕКТИВНЫХ ОБЩЕСТВЕННЫХ И АДМИНИСТРАТИВНЫХ ЗДАНИЙ //PEDAGOG. – 2022. – Т. 5. – №. 7. – С. 380-388.
7. Жураев Б. Г., Акрамова Д. Г. НАПРЯЖЕННО-ДЕФОРМАЦИОННОЕ ПОВЕДЕНИЕ ПОЛИМЕРОВ //PEDAGOG. – 2022. – Т. 5. – №. 7. – С. 372-379.
8. Saidmamatov A. et al. Review and practice of optimal structural design and selection of structural systems //E3S Web of Conferences. – EDP Sciences, 2023. – Т. 365. – С. 02007.
9. Акрамова Д. Ғ. ТАЛАБАЛАРНИ КАСБИЙ ФАОЛИЯТ ХАВФСИЗЛИГИГА ТАЙЁРЛАШНИНГ ТАШКИЛИЙ-ПЕДАГОГИК ЖИҲАТЛАРИ //Journal of Academic Research and Trends in Educational Sciences. – 2022. – С. 167-173.
10. Gulomjonovna A. D. PEDAGOGICAL-PSYCHOLOGICAL ASPECTS OF THE SAFETY PROBLEM //Spectrum Journal of Innovation, Reforms and Development. – 2022. – Т. 8. – С. 53-56.
11. Mamadov B. et al. Reduction of Destructive Processes in Concrete Concrete Processing in Dry-hot Climate Conditions //International Journal on Integrated Education. – Т. 3. – №. 12. – С. 430-435.
12. Raximov, A. M., Alimov, X. L., To'xtaboev, A. A., Mamadov, B. A., & Mo'minov, K. K. (2021). Heat And Humidity Treatment Of Concrete In Hot Climates. International Journal of Progressive Sciences and Technologies, 24(1), 312-319.
13. Komilova, K., Zhuvonov, Q., Tukhtabaev, A., & Ruzmetov, K. (2022). Numerical Modeling of Viscoelastic Pipelines Vibrations Considering External Forces (No. 8710). EasyChair.
14. Ahmedjon, T., & Pakhritdin, A. (2021). Stress-strain state of a dam-plate with variable stiffness, taking into account the viscoelastic properties of the material. Asian Journal of Multidimensional Research (AJMR), 10(3), 36-43.
15. Abdujabborovna, B. R., Adashevich, T. A., & Ikromiddinovich, S. K. (2019). Development of food orientation of agricultural production. ACADEMICIA: An International Multidisciplinary Research Journal, 9(3), 42-45.
16. Tukhtaboev, A. A., Turaev, F., Khudayarov, B. A., Esanov, E., & Ruzmetov, K. (2020). Vibrations of a viscoelastic dam-plate of a hydro-technical structure under seismic load. In IOP Conference Series: Earth and Environmental Science (pp. 012051-012051).
17. Khudayarov, B. A., Turaev, F. Z., Ruzmetov, K., & Tukhtaboev, A. A. (2021). Numerical modeling of the flutter problem of viscoelastic elongated plate. In AIP Conference Proceedings (pp. 50005-50005).
18. Tukhtaboev, A., Leonov, S., Turaev, F., & Ruzmetov, K. (2021). Vibrations of dam–plate of a hydro-technical structure under seismic load. In E3S Web of Conferences (Vol. 264, p. 05057). EDP Sciences.
19. Тухтабаев, А. А., & Касимов, Т. О. (2018). О ВЫНУЖДЕННЫХ КОЛЕБАНИЯХ ПЛОТИНЫ-ПЛАСТИНКИ С УЧЕТОМ ВЯЗКОУПРУГИХ СВОЙСТВ МАТЕРИАЛА И ГИДРОДИНАМИЧЕСКИХ ДАВЛЕНИЙ ВОДЫ. Научное знание современности, (6), 108-111.

20. Тухтабаев, А. А., & Касимов, Т. О. (2018). ИСПОЛЬЗОВАНИЕ НАСЛЕДСТВЕННОЙ ТЕОРИИ ВЯЗКОУПРУГОСТИВ ДИНАМИЧЕСКИХ РАСЧЕТАХ СООРУЖЕНИЙ. Научное знание современности, (6), 104-107.
21. Адашева С. А., Тухтабаев А. А. Моделирование задачи о вынужденных колебаниях плотины-пластинки с постоянной и переменной жесткостью с учетом вязкоупругих свойств материала и гидродинамических давлений воды //Central Asian Journal of Theoretical and Applied Science. – 2022. – Т. 3. – №. 10. – С. 234-239.
22. Sayfiddinov S. et al. OPTIMIZATION OF MODELING WHILE INCREASING ENERGY EFFICIENCY OF BUILDING STRUCTURES OF PUBLIC BUILDINGS //Theoretical & Applied Science. – 2020. – №. 6. – С. 16-19.
23. Sayfiddinov S. et al. Ensuring Energy Efficiency Of Air Permeability Of Interfloor Ceilings In The Sections Of Nodal Connections //The American Journal of Applied sciences. – 2020. – Т. 2. – №. 12. – С. 122-127.
24. Mardonov B., Latifovich A. H., Mirzoxid T. Experimental Studies of Buildings and Structures on Pile Foundations //Design Engineering. – 2021. – С. 9680-9685.
25. Alimov K., Buzrukov Z., Turgunpulatov M. Dynamic characteristics of pilot boards of structures //E3S Web of Conferences. – EDP Sciences, 2021. – Т. 264. – С. 02053.
26. Алимов Х. Л. Определения динамических характеристик свайных оснований сооружений. – 1991.
27. Ходжиев Н. Р. Расчет зданий с элементами сейсмозащиты как нелинейных систем. – 1990.
28. Kovtun I. Y., Maltseva A. Z. Improving the reliability of calculations of bases and soil massifs based on geotechnical control methods //Academicia: an international multidisciplinary research journal. – 2021. – Т. 11. – №. 1. – С. 1367-1375.
29. Ковтун И. Ю. Концептуальные предпосылки отчетного раскрытия информации о собственном капитале предприятия. – 2014.
30. Ковтун И. Ю., Мальцева А. З. БЫСТРОРАСТУЩИЙ ПАВЛОВНИЙ–ЭФФЕКТИВНОЕ РЕШЕНИЕ АКТУАЛЬНЫХ ЗАДАЧ РЕСУРСОСБЕРЕЖЕНИЯ И ЛЕСОВОССТАНОВЛЕНИЯ //НАУЧНЫЙ ЭЛЕКТРОННЫЙ ЖУРНАЛ «МАТРИЦА НАУЧНОГО ПОЗНАНИЯ». – С. 38.
31. Ковтун И. Ю., Мальцева А. З. МЕХАНИЗМ ИЗМЕНЕНИЯ ФИЗИКО-МЕХАНИЧЕСКИХ СВОЙСТВ ДРЕВЕСИНЫ ПРИ РАЗЛИЧНЫХ ТЕМПЕРАТУРАХ И ВРЕМЕНИ ТЕРМООБРАБОТКИ //НАУЧНЫЙ ЭЛЕКТРОННЫЙ ЖУРНАЛ «МАТРИЦА НАУЧНОГО ПОЗНАНИЯ». – С. 45.
32. Kovtun I. Y. Methods Without Formwork Molding of Reinforced Concrete Products //Eurasian Journal of Engineering and Technology. – 2022. – Т. 10. – С. 128-130.
33. Ковтун И. Ю., Мальцева А. З. КОНТРОЛИРУЕМЫЕ ПАРАМЕТРЫ И СРЕДСТВА ИЗМЕРЕНИЙ ПАРАМЕТРИЧЕСКИМ МЕТОДОМ ПРИ ГЕОТЕХНИЧЕСКОМ МОНИТОРИНГЕ ЗДАНИЙ И СООРУЖЕНИЙ. – 2021.
34. Ходжиев Н. Р., Назаров Р. У. БЕТОН ВА АСФАЛЬТ-БЕТОН МАТЕРИАЛЛАРИДАН ФОЙДАЛАНИБ ЙЎЛ ВА ЙЎЛАКЛАР ҲАМДА КИЧИК МАЙДОНЛАР ҚУРИШДА ЙЎЛ ҚЎЙИЛАЁТГАН КАМЧИЛИКЛАР //SO ‘NGI ILMIY TADQIQOTLAR NAZARIYASI. – 2022. – Т. 1. – №. 4. – С. 88-92.

35. Назаров Р. У., Эгамбердиев И. Х., Исмоилов Р. С. ИННОВАЦИОН ПЕДАГОГИК ТЕХНОЛОГИЯЛАРНИ ҚЎЛЛАШ ОРҚАЛИ ҚУРИЛИШ КОНСТРУКЦИЯЛАРНИ ЛОЙИҲАЛАШДА КОМПЬЮТЕР ТЕХНОЛОГИЯЛАРИ //Scientific Impulse. – 2022. – Т. 1. – №. 2. – С. 399-402.
36. Эгамбердиев И. Х., Мартазаев А. Ш., Фозилов О. К. Значение исследования распространения вибраций от движения поездов //Научное знание современности. – 2017. – №. 3. – С. 350-352.
40. Мартазаев А. Ш., Фозилов О. Қ., Носиржонов Н. Р. Значение расчетов статического и динамического воздействия наземляные плотины //Инновационная наука. – 2016. – №. 5-2 (17). – С. 132-133.
41. Хакимов Ш. А., Мартазаев А. Ш., Ваккасов Х. С. Расчет грунтовых плотин методом конечных элементов //Инновационная наука. – 2016. – №. 2-3 (14). – С. 109-111.
42. Ҳакимов ША М. К. К., Эгамбердиев И. Х. ОСОБЕННОСТИ ТВЕРДЕНИЯ БЕТОНА НА ПОРТЛАНДЦЕМЕНТЕ С УЧЕТОМ ПОГОДНО-КЛИМАТИЧЕСКИХ ФАКТОРОВ //МЕХАНИКА ВА ТЕХНОЛОГИЯ ИЛМИЙ ЖУРНАЛИ. – 2021. – №. 4. – С. 102.
43. Abduraxmanovich X. S. H. HELIOTHERMO CONCRETE PROCESSING IN HOT CLIMATES //INFORMATION TECHNOLOGY IN INDUSTRY. – 2021. – Т. 9. – №. 3. – С. 973-978.
44. Хакимов Ш. А., Ваккасов Х. С., Бойтемиров М. Б. У. Основные принципы проектирования энергоэффективных зданий //Вестник Науки и Творчества. – 2017. – №. 3 (15). – С. 136-139.
45. Хакимов Ш. А., Чулпонов О. Г. ОПИТ ИСПОЛЬЗОВАНИЯ СОЛНЕЧНОЙ ЭНЕРГИИ ПРИ ИЗГОТОВЛЕНИИ БЕТОННЫХ ИЗДЕЛИЙ НА ОТКРЫТЫХ ПЛОЩАДКАХ //НАУЧНЫЙ ЭЛЕКТРОННЫЙ ЖУРНАЛ «МАТРИЦА НАУЧНОГО ПОЗНАНИЯ». – С. 93.
46. Хакимов Ш. А., Муминов К. К. ОБЕЗВОЖИВАНИЕ БЕТОНА В УСЛОВИЯХ СУХОГО-ЖАРКОГО КЛИМАТА //НАУЧНЫЙ ЭЛЕКТРОННЫЙ ЖУРНАЛ «МАТРИЦА НАУЧНОГО ПОЗНАНИЯ». – С. 86.
47. Khakimov S. A., Mamadov B. A., Madaminova M. CONTINUOUS VAPORING PROCESSES IN NEW FILLED CONCRETE //Innovative Development in Educational Activities. – 2022. – Т. 1. – №. 3. – С. 54-59.
48. Хакимов Ш. А., Ваккасов Х. С., Каюмов Д. А. У. ПРОБЛЕМЫ ОБЕСПЕЧЕНИЯ ЭНЕРГОСБРЕЖЕНИЯ И ПОВЫШЕНИЯ ЭНЕРГОЭФФЕКТИВНОСТИ ЗДАНИЙ, ОСНОВНЫЕ НАПРАВЛЕНИЯ ИХ РЕШЕНИЯ //Вестник Науки и Творчества. – 2017. – №. 3 (15). – С. 140-142.