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## INNOVATION IN THE PRACTICE OF MAINTENANCE, REPAIR AND USE OF THE «GARDENER» MOSQUE

**Abstract:** each architectural monument in Khiva is a product of a certain period, reflecting the culture, environment, science and technical development of that period. In this regard, this article presents a number of interesting information on the monument, given that one of the most ancient architectural structures of Xiva is the period of storage, repair and use of the "gardener" mosque.

**Key words:** architectural monument, Mosque, Foundation, environmental and technologicalogen impact, lifelong, device, storage, repair, utilization, artistic composition.

**Language:** English

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### Introduction

One of the most ancient cities on earth, Khiva is famous for its architectural monuments to the world. To see rare architectural monuments, thousands of tourists from all corners of the world visit the city. Each architectural monument in Khiva is a product of a certain period, reflecting the culture, environment, science and technical development of that period. The fact that architectural monuments have been preserved for centuries to this day, indicates the skill of the Masters of that time, the high level of quality of work. In ancient and beautiful Khiva, from ancient times to this day, neighborhoods, guzar mosques have been built and citizens living in these mosques have been able to perform Friday prayers. The mosque "gardener" was also built in 1809 year at the beginning of the XIX century, and mana roppa-rosa has been distinguished by its splendor in the Ichanisheher neighborhood since 213 year (picture 1).

In the south-eastern part of the Museum Reserve "Ichan Qala" in Khiva is located the mosque "Gardener". In the epigraphic inscription on the marble plaque of the mosque it is written that it was built in 1809 year by the Pahlavon slave. In the hands of Halvati sufiho, written by someone whose author was unknown in 1813 year, these thoughts can be read: "and nurnishon eltuzarkhan's ayyom, who found a building in the State, demolished the mosques of Zubayda lady with Pahlavon slave gardener and made Adogah as a dome of stone". So it turns out that the name of the mosque, which was first built in the raw nigli nigirik (Shepherd) method, was Zubaydakhonim. The mosque was called "mosque"

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and in 1922 year it was given 48 rooms with 163 inhabitants of the United State Administrative Office<sup>1</sup>.

More than two hundred years have passed since the reconstruction of the mosque-local residents

consider it a churchyard "the Tomb of the Lady of Malika", which was built by gluing it from the west side. In truth, this grave should be the grave of my Zubaydah<sup>2</sup>.



1-picture. Overview of the mosque "gardener" in XIV-XV centuries

Total size of the mosque-26,0 x 11,2 m;  
The size of the terrace-4,95 x 10,25 m; height-5,7 m;

The size of the large room of the mosque – 6,8 x 6,8 m; height 13,0 m;

The mosque is restored from a fully ripe brick, and the dimensions of a square-shaped Muslim brick are 27,0 x 27,0 x 5,0 CM and 28,0 x 28,0 x 6,0 CM;

The floor parts of the rooms are made of square-shaped ripe brick; g'isht dial is made using a ganch blend;

This mosque with a large dome in terms of architectural composition reminds the monument of

the XIV-XV centuries, the reason for this is its interior decoration, carved patterns of two columns on the porch, the hadiths written on them are characteristic of this period. The inscription on the marble board on the wall at the top of the entrance door of the mosque, the Persian language, is written in the letter Nasta.

The entrance door of the mosque is decorated in the quieter Khorezm national wood carving style, with inscriptions in Arabic on the top of the door, in which it is written that the son of Adina Muhammad Ra'z Muhammad worked this door (see Picture 2).



2-picture. The inscription on the entrance door of the gardener mosque

<sup>1</sup> M. Ne'matullaev map. Archive of the museum-reserve fund" Ichan-kale". Inv. № 2369.

<sup>2</sup> K.Godererganov. Khiva is the oldest dilapidated fortress. 2018. Urgench. 310p.

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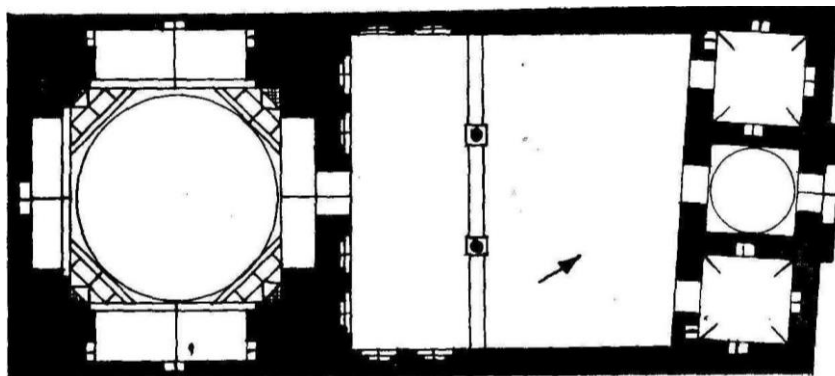
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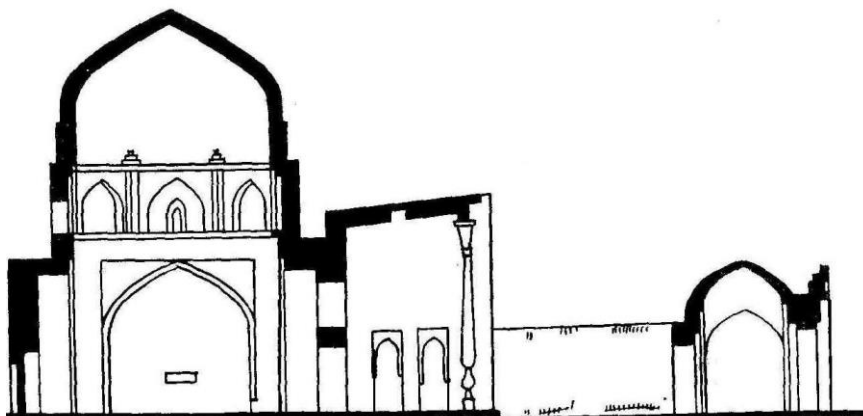
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The architectural construction style of the gardener mosque deserves praise. This mosque in the symmetrical structure is located along the longitudinal axis in the north-south direction, along the gate,

courtyard, veranda and Chamber (3, 4 pictures). The entrance part of the mosque was built in three parts. In the center there is a passage room with a dome, on two sides there are toilets.



3-picture.



4-picture. The fortification of the gardener mosque

In the Khiva neighborhood mosques are built smaller than the Mosque by the size of the building area, but do not stay out of them with their quieter decorations. Outside the gatehouse is treated with colorful decorative steps, carved pattern on the gate ishlangan. Inside is plastered with ganch.

The ceiling of the courtyard of the mosque is also covered with a flat roofing style with wooden beams and boards, the ceiling of which is decorated with very beautiful patterns and colors (Figure 1). Carved patterns on wooden columns and inscriptions in Arabic and Persian languages.

According to the planned project of the gardener mosque - the shelves (niches) of a large room in the form of a square, the basis of which is equal to the breadth and height. The entrance to the room is

opposite the entrance door to the mosque. The closing of the niches is closed with bullet arches. On a rectangular wall with a height of 5,5 meters, eight-pointed barbed parishes of 2,5 meters ishlangan.

These wonderful miraculous monuments, created with human hands, cause great damage to the negative effects of Ecology today. The wooden structures of the "gardener" mosque were also considered biologically negative, as in most other historical architectural monuments of Xiva - the termite was partially damaged. Currently, the scientific staff of the Khorezm Academy of Sciences is engaged in processing wooden devices with "deceptive nutrients", which are used in the fight against termites (picture 5).

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**5-picture. Violation of the mosque porch and damage to the roof timber from the termite (processing)**

In order to prevent the talophates in the picture 5 above, the unique monument in Ichan kale-"Gardbonli" mosque is being repaired under the project of UNESCO "Afghanistan, Centralnaya Aziya i Iran - obtshee nasledie Vdol Shelkovogo puti I koridorov v Evropu i iz Europe".

The following 5, 6, 7 pictures show the impact on the technical condition of deformations caused by the adverse effects of time and nature on the devices of the mosque "gardener", as well as the wetting of the lower Sokol parts of the existing walls, as well as several cracks in the walls, the size of which is 2-5 cm.



**6-picture. A clock-Type Indicator was installed on the cracks that appeared on the wall of the large room**

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**7-picture. The size of the cracks that appeared on the wall on the north side of the large room was determined**

The main load-bearing structures of the mosque "gardener" - walls, roofs, roofs, parts of Sokol were dampened from the rise of groundwater and precipitation, as well as from these effects - salinity, damage to wooden structures from the termite, which was considered a biological effect, their absorption by

the insiders and other negative consequences, which undermined the strength of the devices (see pictures 5, 6, 7). However, with the practical assistance of UNESCO officials, the above-mentioned shortcomings in the research of the technical condition of this monument were eliminated (picture 8).



**8-picture. The state of the mosque and the large dome of the room without repair**

In addition, a number of proposals are being made on the basis of innovative concessions in the practice of maintenance, repair and use of the "gardener" mosque. Bunda is intended to use this architectural monument as a "training center of repair specialists". Currently, several three-dimensional applications have been developed to facilitate the

processes of drafting, improve its quality and of course save time, that is, to speed up the work.

Below are a number of proposals and recommendations for the effective use of the "gardener" mosque based on the innovative developments of AutoCAD, 3D studio MAX, LUMION programs, which have become the favorite

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programs of professionals related to architecture, builders and construction communities within such programs [1].



**9-picture. The offer to equip the large dome room of the mosque using AutoCAD, 3D studio MAX, LUMION programs**

In these images, it is possible to see the current state of the mosque "gardener", and the project created using AutoCAD and 3ds MAX programs, that is, the circumstances (future) that will be after the repair. With the help of the program, the creation of 3d models of all equipment in the Inter project is

possible. In this interior it is possible to see that the "second lifetime" of the mosque is designed for the purpose of education for young repairmen. If 3d MAX software is watching specially rendered images through a VR BOX device, you can avoid them as if you were standing in the room [2].



**10-picture. The mosque offers to equip its large dome room with AutoCAD, 3D studio MAX, using its programs**

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So today, computer technology is in rapid development in all areas. In particular, it has penetrated deeply into architecture, construction, automotive and many other areas. Currently available Auto CAD, 3DS MAX, Lira, Photoshop and many similar programs are also slowly entering repair work [3]. These programs, as we have seen above, create great comfort in the imagination and repair of architectural monuments restoration work. The above-mentioned napkins can be connected with three-dimensional printers, making it possible to create models of Memorial buildings on the basis of mashtab, or create animated rollers.

With the help of the programs mentioned above, it is possible to process video images of these projects in MP4, AVI, MOV etc. formats enriched with sound and visual effects of different types [4].

The most important thing is that with the help of computer technology, it performs the same results as above in a short time and qualitatively.

Such projects can be used not only for architecture, construction or other technical industries, but also for the development of Tourism. For example: the historical monument can be placed on the internet ishlangan images, video formats based on the programs listed above. In order to increase the flow of visitors, it is sufficient to write under these images that "if you want to feel the atmosphere of the historical period in the image, that is, the acoustics in

the room, the footsteps of historical personalities, the Echo and the air, you can come and feel it with your own body, your senses." This, in turn, creates the ground for innovation not only in the practice of effective use of the architectural monument, but also in the field of Tourism.

As can be seen in the above images (9, 10 pictures), today there is an opportunity to create various innovations on the basis of innovative conciliation, visual repair, restoration on the basis of modern technologies on architectural monuments, such digitized technologies are paid much attention to all over the world and of course our republic. Because, only with the help of such technologies can fully reflect the idea of the project. With the help of modern technologies, the project can be developed in a short time, achieving positive qualities such as time economy. It turns out that only effective use of them depends on our speculators. For this reason, deep research will also be needed to take advantage of the modern digital technologies that are being promoted and put into practice.

In conclusion, we can say that in the practice of storage, repair and use of architectural monuments, the mosque "Gardbonli", which is considered to be our invaluable cultural heritage chosen on the basis of the principle of innovative solidarity, was also supported by UNESCO and was ready to live its "second" life.

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