ARCHITECTURE OF THE KHOREZM OASIS IN THE XI–XIII CENTURIES

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Abstract: *This article examines the development of architecture in the Khorezm oasis in the XI-XIII centuries in detail, its significance as an important means of reflecting the social development of the country, and the specific features of architecture during the reign of the Anushtaginid Khorezmshahs. The article provides an analytical overview of information on the description of historical monuments of Khorezm in the Middle Ages.*

Keywords: *architecture, Khorezmshahs, mausoleum, Gurganj, cities, monuments.*

Introduction. In the XI–XIII centuries, special attention was paid to architectural activity in the Khorezm oasis. Architectural monuments, administrative buildings, madrasas, mosques, caravanserais, and mausoleums were constructed in a new architectural style. These buildings were mainly erected in the central parts of cities. During the XI-XII centuries, baked brick became the main construction material in Khorezm architecture. This material provided wide possibilities not only from a structural but also from a decorative point of view. Khorezm bricks were distinguished by their exceptional durability due to the high quality of the raw material (clay) and advanced firing technology. Baked brick was used not only in wall construction but also as a decorative element. By laying bricks in various ways (vertically, horizontally,

or diagonally), geometric patterns such as “sovut,” “balkhi,” and others were created. This technique was especially widely used in the decoration of portals, arches, and the areas beneath domes. In terms of color, the natural yellowish-reddish tone of the brick gave buildings a warm and attractive appearance. Brick dimensions were usually 25×25×5 cm or 28×28×5 cm, which made it convenient to calculate architectural proportions.

By the XI-XIII centuries, urban planning in Khorezm had reached a high level of development. In city planning, traditional Eastern principles played an important role: the central congregational mosque, the market square (chorsu), and the intersection of the main streets. Gurganj (Kunya-Urgench), Kat, and other cities became important hubs not only of regional but also of international trade routes. The system of defensive structures was also significantly improved. The walls surrounding the cities reached a height of 8–10 meters and were reinforced at regular intervals with semicircular towers. The gates had a complex structure and were often designed in the form of a zigzag passage or consisted of outer and inner courtyards.

Before the Khorezmshah period, architectural decoration was mainly expressed through carved terracotta and ornamental brickwork. Terracotta (fired clay) tiles were widely used to decorate wall surfaces. Geometric (chain patterns, eight-pointed stars, rhombuses) and vegetal (bush, palmette) ornaments were carved in deep relief on these tiles. Epigraphic decoration (Kufic script) also played an important role, but it was mainly used in religious buildings. The inscriptions were usually taken from the Qur’an and served not only a decorative but also a spiritual and educational function. The color palette of this period was limited and consisted mainly of the natural color of brick, light blue, and turquoise. However, due to the complex compositions of ornaments and the play of light and shadow, the decoration achieved a strong

artistic effect. By the beginning of the XII century, Khorezm architecture had reached a high level of development and had taken shape as an independent school with distinctive stylistic features. The main characteristics of this school were:

Structural traditions — the use of complex domed and vaulted systems, double-shell domes, and the effective use of baked brick.

Spatial solutions — centralized plans, symmetrical arrangement around an inner courtyard, and clear proportional relationships of architectural volumes.

Decorative system — geometric and epigraphic ornamentation based on carved terracotta, a restrained color range, and skillful use of light-and-shadow effects.

Urban planning principles — a clearly planned urban structure, a strong defensive system, and logical placement of public buildings.

In the process of its formation, Khorezm architecture developed under the influence of the architectural traditions of neighboring regions Transoxiana (Mawarannahr), Khorasan, Iran, and the Dasht-i Kipchak. However, these influences were creatively reinterpreted by local masters and adapted to the specific climatic, economic, and cultural conditions of Khorezm. For example, the courtyard layout with a veranda, borrowed from Iranian architecture, was used more widely and openly in Khorezm, which was done to improve wind circulation in the hot climate.

In the XI-XII centuries, some mausoleums were built with tent-shaped (conical) domes. This type of structure was a new architectural form for its time and was known as the “Gumbazi Turkistoni” style[1]. This style gained wide recognition in the East. Mausoleums built in the Gumbazi Turkistoni style can

[1] Аҳмедов М.Қ. Ўрта Осиё Меъморчилиги Тарихи. Тошкент. ”Ўзбекистон”. 1995. Б 146.

be seen in the Fakhr al-Din Razi and Sultan Tekesh mausoleums in Kunya-Urgench. These buildings were constructed of baked brick and consisted of an inner and an outer dome. In their architecture, the role of courtyard compositions increased, and the importance of monumental portals (pishtaqs) in the overall structure also grew. Domed constructions became a distinctive feature not only of Khorezm but of the entire Central Asian architecture of this period. Khorezm architects used various types of squinches (tromps) and pendentive constructions to solve the problem of transitioning to the dome. These techniques were further perfected during the period of the Khorezmshahs and later in the architecture of the Golden Horde.

The Fakhr al-Din Razi and Tekesh mausoleums in Kunya-Urgench, although belonging to the widely widespread Central Asian type of portal-dome composition, are distinguished by their tent-shaped domes placed on faceted drums. In the decoration of portal-dome buildings in present-day Turkmenistan, the artistic potential of brick was widely exploited[2].

During the reign of the Anushtaginids in the XI-XII centuries, as a result of the economic and cultural development of the Khorezm oasis, large-scale constructions began to be erected. In particular, the construction of arches and domes in baked brick became a tradition. By laying bricks in various ways (vertically, horizontally, diagonally), geometric patterns such as “sovut,” “balkhi,” and others were created. This technique was especially widely used in the decoration of portals, arches, and the zones beneath domes. The natural yellowish-reddish color of brick gave the buildings a warm and attractive appearance.

Another characteristic feature of the architecture of this period was the use of glazed and colored tiles in buildings. As a result, various specialized

[2] Аҳмедов М.Қ. Ўрта Осиё Меъморчилиги Тарихи.

crafts emerged in construction; architecture entered history under the name “Binokor shoh” (Master Builder King), the art of girih reached a high level, and Arabic calligraphy rose to the level of ornamental decoration[3]. From the X century, Kufic script, and from the XI-XII centuries, Naskh script began to be widely used in architecture. One of the most remarkable examples is the Mausoleum of Sultan Sanjar in Merv. It is assumed that this building was erected during the lifetime of the Seljuk ruler of Khorasan, Sultan Sanjar, who died in 1175. The thickness of its walls reaches 5 meters, and the interior of the mausoleum is a square with sides of 17 meters. The interior height reaches 35 meters, which gives the structure an extremely monumental character. The entrance is located on the western side. The rectangular lower part has a height of 15 meters. Above it, the octagonal transition zone leading to the dome forms an arched gallery both on the exterior and interior. The dome structure rises from each side of the octagon. According to historical sources, the exterior of the dome was originally blue in color.

Many scholars note that the use of glazed tiles began precisely in this period, that is, from the XII century. Most city mosques of this period were of the courtyard-column type (Shah Sanam, Qavat-Qala, Mizdahkan). An integral part of such mosques was the courtyard with numerous wooden columns installed on round or stepped, pyramidal stone bases. During the Mongol period, a number of changes occurred in the architectural and planning structure of cities.

The Mausoleum of Fakhr al-Din Razi is the oldest monument among all those preserved in Kunya-Urgench and dates back to the XII-XIII centuries. It is distinguished by the simplicity of its form, characteristic of Khorezm architecture, and by the emphasis on the silhouette and color of the roof. The

[3] Аҳмедов М.Қ. Ўрта Осиё Меъморчилиги Тарихи.

mausoleum is small in size and has an almost square plan. It consists of a twelve-sided pyramidal dome and a drum placed on top of a slightly tapering cubic structure made of brick.

Small arched niches with stone lattice openings articulate the undecorated brick façades of the square chamber. The building is covered with a spherical dome over a square base expanded by four corner niches; four window openings are cut into the drum facing the front. Although the mausoleum has been relatively well restored, noticeable deformations can be seen in both the ancient and the restored masonry. The width of the foundation is about 1.6 meters, reaching up to 1.9 meters on the western side, while the thickness of the walls is 1.5–1.6 meters. The monument was restored between 1940 and 1959. Detailed excavations of the adjacent cultural layers, which reach a thickness of 1.5 meters, help to clarify the history and, above all, to reconstruct the lost parts of the monument and its overall appearance. Almost the entire surface of the outer dome has been preserved. It should be noted that the faceted roofing bricks of the outer dome are purely decorative, since the inner part has a conical shape. In general, the structure of the roof and the presence of openings have withstood the effects of time quite well. The precise structural design of the entire monument, the high overall quality of workmanship, and the refined artistic treatment testify to the high level of craftsmanship of the builders. This makes the study of the monument particularly important both for determining its original appearance and for developing measures for its strengthening and future preservation, as well as for identifying the causes of deformation. It has been established that the mausoleum is resistant to earthquakes of up to 7 points. The weakening of the monument occurred as a result of long-term neglect, weathering, and destruction, which led to the loss of stability, or more precisely, to the

beginning of critical deformations. A study of the structures of the Fakhr al-Din Razi Mausoleum shows that its current condition is generally safe, but that urgent conservation work is required. The "Kunya-Urgench" State Historical and Cultural Park was established in 1985. After the ancient city of Kunya-Urgench was inscribed on the UNESCO World Heritage List in 2005, the mausoleum was restored. The main reasons for the recognition of the mausoleum by UNESCO are as follows:

- its status as a unique example of architecture from the period of the Khorezmshahs;
- its representation of an important stage in the development of Islamic architecture in Central Asia;
- its reflection of historical urban planning and monumental construction traditions.

During restoration works, additional three-step stairways were installed alongside the main staircases, and the surrounding area was landscaped[4]. According to some studies, the monument dates to the second half of the 12th century. The mausoleum is sometimes also referred to as the Il-Arslan Mausoleum, although the reasons for this remain unclear[5]. The Il-Arslan Mausoleum is considered an outstanding example of medieval architecture, renowned for its simplicity and elegance. At different times, it fulfilled several important functions:

- it served as a symbol of the ruler's power and grandeur;
- it functioned as a pilgrimage site;
- it was a testing ground for new structural and artistic solutions.

[4] Sayan, Yuksel. Turkmanistondagi mimari asarlar: XI-XVI. Yüzyıl, Kültür Bakanlığı, Ankara, 1999. Rossi-Osmida, Gabriele. Turkmaniston atrof-muhit, tarixi, yodgorliklari, etnografiyasi va Orol dengizi, Centro Studi Ricerche Ligabue, Rim, Turkmaniston 1996 yil. www.archnet.org

[5] https://www.orientalarchitecture.com/sid/1303/turkmenistan/konye-urgench/il-arslan-mausoleum

It laid the foundation for the tradition of constructing monumental mausoleums during the Khorezmshah period and had a strong influence on the development of architecture in subsequent centuries. After the invasion of Khorezm by the troops of Genghis Khan in 1221, a large part of the city was destroyed. Nevertheless, the mausoleum survived. According to historical sources, after the devastation of the city, the Mongols left only one mosque standing in the main part of the city. Restoration works carried out in the 1980s included thorough repairs of the structure, particularly the walls of the mausoleum and the brickwork of the dome. At present, in order to preserve the mausoleum, the following measures are being implemented by UNESCO specialists:

- structural reinforcement works;
- restoration of the dome and walls;
- scientific reconstruction of damaged masonry and terracotta elements;
- establishment of a protective zone around the monument;
- continuous monitoring and scholarly observation.

Il-Arslan’s eldest son, Tekesh, who became the ruler of Gurganj, inherited the throne. Tekesh was the founder of the Khorezm Empire and ruled from 1172 to 1200. The Mausoleum of Sultan Ala al-Din Tekesh was built in the year of his death, in 1200. It is one of the few monuments that survived after the Mongol invasion.

The Tekesh Mausoleum reaches a height of about 30 meters. Its crowning element is a conical dome covered with blue tiles, resting on a circular drum divided into 24 sections. The Tekesh Mausoleum is often compared to the Mausoleum of Sultan Sanjar in Merv. Both monuments are symbolic landmarks, rising above other buildings and serving as emblems of

their respective cities[6]. The building is constructed of brick and consists of a square hall with walls 11.45 meters high, a massive circular drum, and a conical roof hiding an inner dome beneath it. The dome is connected to the square walls by an octagonal transition zone. The structure between the dome and the octagon is decorated with 16 shallow niches, semicircular in shape. This motif is similar to the ornament found on an VIII century marble mihrab in the Baghdad Museum and is rarely used in Central Asia. The outer conical roof was built of horizontal layers using the technique of a false vault. From the inside, it is supported by twelve supports standing on the inner dome. Although this construction method may seem risky, the condition of the roof is relatively good; only its upper part has been destroyed, and the blue majolica decoration has been partially damaged. One of the distinctive features of the architecture of the building is its façade. It resembles a tall arched niche whose original appearance has been lost. Research suggests that the Tekesh Mausoleum may once have been part of a large architectural complex consisting of several buildings. Some scholars believe that this structure originally served a different purpose and may have been a government building or even the palace of the Great Khorezmshahs[7]. However, architectural and written evidence confirms that the building is indeed the Mausoleum of Sultan Tekesh. According to sources, it was part of a large complex built by Tekesh, which included a madrasa and a library[8]. Fragments of blue faience decoration have been preserved on the dome and in some friezes. As a cultural heritage monument,

6 https://www.orexca.com/turkmenistan/kunya_urgench/sultan_tekesh_mausoleum.htm?utm_source=chatgpt.com

7 https://bektour.uz/konyeurgench?utm_source=chatgpt.com

8 https://ayan-turkmenistan.travel/tours/ayan-travel/monuments-of-kunya-urgench?utm_source=chatgpt.com

the Mausoleum of Sultan Tekesh demonstrates the high level of state power, art, and architecture during the Khorezmshah period. It is considered one of the most prominent landmarks of Kunya-Urgench. Despite numerous restoration works, the mausoleum still shows serious damage and deformations. The architecture and architectural decorative art of Khorezm in the XI-XII centuries represent a complex and highly productive period in the cultural and historical development of Central Asia. The materials studied in the course of this research show that the Khorezm architectural school was formed not only as a result of the continuous development of local traditions, but also as a product of broad regional cultural exchanges and creative synthesis. Research indicates that Khorezm architecture developed in conditions of active cultural interaction. It maintained constant contact with the traditions of Khorasan, Iran, Transoxiana (Mawarannahr), and the Dasht-i Kipchak, creatively reinterpreting them in accordance with local needs and possibilities. At the same time, Khorezm itself contributed to the architectural development of neighboring regions through its own architectural solutions and decorative styles. The architecture of the Khorezmshah period (late XII– early XIII centuries) marked the peak of local building traditions. During this time, construction techniques based on baked brick were perfected, double-shell domed structures became widespread, and the urban planning system grew more complex. Monuments such as the mausoleums of Sultan Tekesh and Fakhr al-Din Razi entered history not only as religious and spiritual centers, but also as embodiments of advanced engineering thought and high artistic values. Decorative art was mainly based on carved terracotta and brick ornamentation, and despite the limited color palette, it was distinguished by compositional perfection and deep symbolic meaning. Today, the monuments of Khorezm retain their significance not only as national, but also as universal cultural values. Through their study, it

becomes possible to gain a deeper understanding of the rich cultural history and artistic thinking of the peoples of Central Asia. Written sources and field research show that while the composition and original appearance of the entire complex remain highly debatable, its history is in many respects unclear. Therefore, in addition to the capital restoration of the dome, it is also advisable to carry out in-depth archaeological research in the adjacent area. Balkhi domes, double-layered domes, and conical (kulohiy) domes, which are characteristic features of the Khorezm architectural school, can be clearly observed in the monuments of Kunya-Urgench. At the same time, the features of the Transoxiana school, mosque types, and the structural characteristics of minarets, as well as their growing importance in urban planning, can also be noted.

Conclusion. In the XI-XII centuries, mosque construction also developed widely and its own distinctive type emerged. Domed buildings with a square base became widespread in Central Asia and acquired specific forms and qualities depending on local conditions. During this period, the construction of portal-domed mausoleums also developed; their portals were richly decorated, and new styles and trends appeared in mosque architecture as well. In construction, materials such as baked brick, alabaster, and ganch (gypsum) were widely used. The main feature of Khorezm architecture in the XII-XIII centuries was its stability and adaptability. As an integral part of Central Asian culture, the Khorezm architectural school served as an important artistic and technological foundation for later periods, especially for Timurid architecture. Its achievements not only remind us of the greatness of the past, but also highlight the enduring relevance of preserving and studying architectural heritage.

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