

MPHTI 81.14.10

Omer ZAİMOĞLU

Akdenis University

Antalya, Turkey

E-mail: omerzaimoglu@hotmail.com

Geometric and ornamental features of the mausoleum of Ahmet Yassauı

Abstract:: *The article examines the process of developing the project of the mausoleum of Ahmet Yassauı, they used the module, operated with half and a quarter. The modular system determined the dimensions of the architectural volumes, the proportions of internal and external articulations, the proportionality of window and door openings, the proportionality of the sides of the spans, the construction of arches, niches, domes, stalactites, etc. square and diagonal of the main room. The outer walls of the mausoleum have a three-part division and a large-scale girikh and ornamented inscriptions run along the middle plane; an epigraphic frieze runs along its upper part.*

Keywords: *mausoleum of Akhmet Yassauı, architectural volume, Amir Timur, the city of Yassauı domes, portals, Geometric, ornamental.*

DOI: <https://doi.org/10.32523/2220-685X-2021-62-3-36-43>

Amir Timur was preparing for the wedding, intending to marry the princess, the daughter of the Mogolistan ruler of the Khazir Khoja-khan Tukel-hayim. Timur left to meet his bride and on the way he stopped at the Akhangeran tract, not

far from the village of Chinas. From here Amir Temur left for the city of Yassy, where he performed a solemn ziarat, a prayer ceremony over the grave of Ahmed Yasavi.

Ninety city Turkestan, formerly called Yassi, was one of the nodes of the Great Silk Road, connecting it with the Dashti of the Kipchak steppe. Caravans from China, Persia and Byzantium, loaded with the finest china, beautiful fabrics, jewelry and other goods, went through this city. It was here that the wonderful Khoja Ahmed Yasawi lived his life, whose poems brought people thoughts of goodness and honor, poems that people learned by heart and passed along a chain far beyond.

Having examined the mazar of the Turkic sheikh, built in the XII century, Timur ordered to demolish it and build a new one on this place. In Timur's decree, elaborated in great detail, the main dimensions of the mausoleum were determined in advance [1].

Written sources indicate that Timur personally participated in the development of the project of the future mausoleum, gave specific instructions to his builders.

The domes and vaults of the monument represent a complete collection of all known types of Central Asian vaults of the previous period and some innovative solutions that marked the beginning of the development of new constructive techniques in architecture. The main dome, 18.2 m in diameter, is the largest surviving brick dome in Central Asia. The portal, with an arch span of 18.2 m and a height of 44 m, emphasizes the monumental character of the buildings [2].

According to the work of Sharaf ad-din Ali Yezdi "Zafar Name" ("Book of Victories"), the foundation of this building is associated with the events of the end of 799 AH and he issued a decree on the construction of a new mausoleum over the grave of Sheikh Ahmed. The mausoleum was built by his masters, collected from all over. Some of the names of the

masters have come down to us in inscriptions on different parts of the mausoleum. The masonry of the tiled facades of the building was carried out by the master Haji Hasan, a native of Shiraz, whose name and date of work (800 AH) are lined with blue bricks above the niche of the northern portal.

A hexagonal tile from the drum of a small ribbed dome above the tomb itself retained the name of another Shirazian - Sheme Abdal-Wakhab, who, judging by the inscription, was the creator, if not of the entire mausoleum, then probably of the tomb itself. The Isfahan Ez-ed-Din, the son of Taj-ed-din, made bronze hinges inlaid with silver on two doors. And also some bronze lamps. A huge bronze water cauldron, unique in its dimensions, was cast in the village of Karnak. Avtrom were the master Abd-al-Aziz and his son Sharaf ad-Din Tabrizi [3].

Proof of the heyday of Amir Timur's era is the structure of the mausoleum and the outstanding size, the perfection of its proportions, the novelty of architectural planning and design solutions, the variety of architectural decor give a complete picture of the monumental architecture. Ancient blueprints for the construction of a unique medieval monument were discovered in Tashkent. Uzbek Turkologists handed over copies of the artifacts to their Kazakh colleagues. According to the historical document, the height of the portal part of the monument should be 63 meters. Today it reaches about 44 meters. But Amir Temur did not manage to fully implement his plans and after the death of Timur, the construction of the mausoleum stopped. Since during the life of Temur, only one third of the mausoleum was built. The idea of Timur was continued by Abdullah Khan after 2 centuries and he also failed to complete the construction of the mausoleum. The scientist says that in the original the domes should be 10 meters higher. And the facade of the mausoleum was to be decorated with patterns and ornaments. Director of the Institute of Turkology at the MKTU named after HA.

Yassau, invites the President and the Government of Kazakhstan to support the idea of continuing the construction of the Yassau mausoleum according to ancient drawings. Thus, to continue the work of Amir Temur and to bring his ideas to life [5].

During the construction, special arithmetic and geometric formulas were created for the creation of this mausoleum of the Middle Ages, this is to prove the high flowering of science and culture in the countries of the Middle and Near East. Abu Nasr al-Farabi wrote about this in his treatise "Enumeration of Sciences" "There are also numerous geometrical clever methods. Among them is the art of construction management ". Many of his provisions were subsequently used by scholars of the Middle East. The Book of Spiritual Skillful Techniques and Natural Secrets about the Subtleties of Geometric Figures is almost entirely included in a treatise by Abu al-Wafa al-Buz-Jani (940-998) called The Book of What a Craftsman Needs from Geometric Constructions. The works of al-Farabi and Giyas-ad-din al-Kashi played a great role in the methods of constructing the architectural form and created the treatise "The Key of Arithmetic". These mathematical works were widely spread among medieval architects, who now had practical methods of constructing architectural forms. The role of mathematical science in architecture and statements are found in the great thinkers of the East like Ibn Sina, Biruni and al-Khwarizmi.

The flourishing of culture in the pre-Mongol period is reflected in the development of architecture and applied arts. The production of ceramics covered with glazed painting with polychromy is developing. Along with raw bricks and pakhsa, white bricks are widely used for mass buildings, and ganch (alabaster) is used as a binding material. Decorative details are also made from it. Terracotta and tiled tiles are widely used in the decoration of facades. The technique of erecting floors has

been improved. Vaults of various shapes, variants of pointed arches appear, and the designs of domes are improved.

In the process of developing the project, they used the module, operated with half and a quarter of it. The modular system determined the dimensions of the architectural volumes, the proportions of internal and external articulations, the proportionality of window and door openings, the proportionality of the sides of the spans, the construction of arches, niches, domes, stalactites, etc.

The proportionality of parts of the building in terms of plan and space was determined mainly by the ratio of the length of the side of the square and the diagonal of the main room. The outer walls of the mausoleum are divided into three parts. A large scale girikh and ornamented inscriptions run along the middle plane, an epigraphic frieze runs along its upper part, and a 1.85 meter high stone panel along the bottom (basement part). The epigraphic frieze running along the top of the three facades of the mausoleum contains verses from the Koran (6th sura - "Cattle", 58 ayah). Its inscription is formed by glazed bricks on a terracotta background. This frieze is limited by two majolica borders. The height of the frieze is 2.37 meters without a border, and with a border - 2.62 m. The inscriptions are made with blue tiles and outlined with purple glaze bricks. All colored irrigation tiles are installed vertically, non-irrigated tiles are installed horizontally. The set was carried out with a seam, right on the plane of the walls. These claddings are supported by stone cantilever belts that run on the same horizon along all the facades of the building (Figure 1) [6].

Significance as an outstanding architectural work that has come down to us not in ruins, but in an integral condition, is recognized at the world level. In July 2003, by the decision of the World Heritage Committee, the mausoleum of Khoja

Ahmed Yassavi was included in the UNESCO World Heritage List.

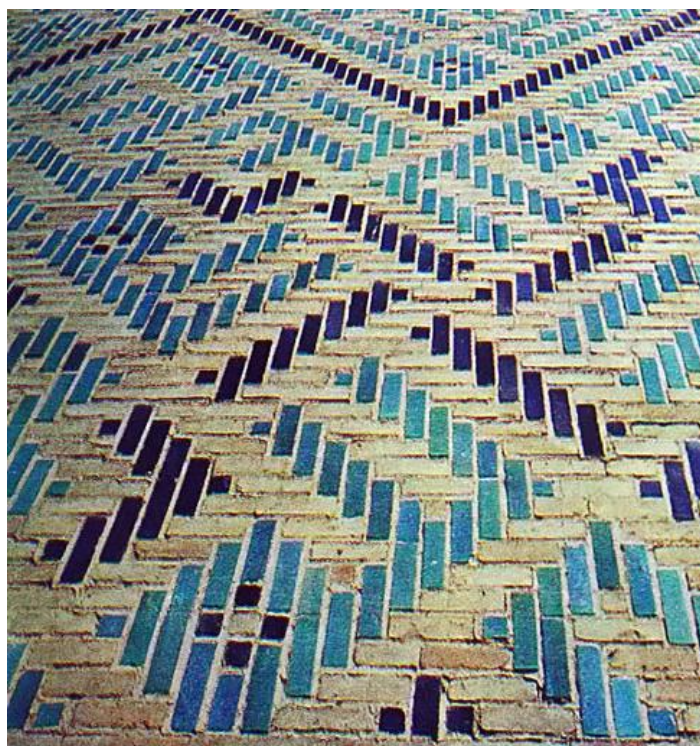


Figure 1

This mausoleum is of great value both for us and for future generations and is one of the most important monuments in history, as well as a place for visiting ladies and tourists.

References

1. K.M. Bypakov. Localization of the cities of the Kazakh Khanate // News of the National Academy of Sciences of the Republic of Kazakhstan. -Almaty: No. 5. 2014.-78 p.
2. <http://zerrspiegel.orientphil.uni-halle.de/t1369.html>
3. V.A. Akhmadullin. The activities of the Soviet state and the spiritual administrations of Muslims on the organization of pilgrimage (1944-1965): an analysis of historical experience and significance for the present. -M.: Islamic book. 2016. -104 p.
4. Южно-Казахстанская область: Мавзолей Ходжа Ахмета Яссауи, XIV век.

5. History of Kazakhstan in Persian sources. -Almaty: Vol.5. Dyke Press. 2007. -87 p.

6. Южный Казахстан, древний город Туркестан.

Өмер Займоғлу
Акденис университеті
Анталия, Түркия
E-mail: omerzaimoglu@hotmail.com

Ахмет Яссауи кесенесінің геометриялық және ою-өрнек ерекшеліктері

Аңдатпа: Мақалада Ахмет Яссауи кесенесі жобасын жасау барысы жарты тоқсанмен жұмыс істеген модуль арқылы қарастырылады. Модульдік жүйе архитектуралық көлемдердің өлшемдерін, ішкі және сыртқы түйіспелердің пропорцияларын, терезе мен есік саңылауларының пропорционалдылығын, аралықтардың жақтарының пропорционалдылығын, аркалардың, тауашаларды, күмбездердің, сталактиттердің дизайнын және т.б. негізгі бөлменің шаршы және диагонали. Кесененің сыртқы қабырғалары үш бөлікке бөлінген, ортаңғы жазықтықтың бойында көлемді гирих пен ою-өрнекті жазулар, жоғарғы бөлігінде эпиграфиялық фриз орналасқан.

Түйінді сөздер: Ахмет Яссауи кесенесі, сәулеттік том, Әмір Темір, Яссауи қаласы, күмбездер, порталдар, геометрия, ою-өрнек.

Омер Займоғлы
Университет Акденис
Анталия, Түркия
E-mail: omerzaimoglu@hotmail.com

Геометрические и декоративные особенности мавзолея Ахмета Яссауи

Аннотация: В статье рассматривается процесс разработки проекта мавзолея Ахмета Яссауи, при этом использовался модуль, оперировавший половиной и четвертью. Модульная система определила размеры архитектурных объемов, пропорции внутренних и внешних сочленений, пропорциональность оконных и дверных проемов, пропорциональность сторон пролетов, конструкцию арок, ниш, куполов, сталактитов и т.д. квадрата и диагонали главного помещения. Наружные стены мавзолея имеют трехчастное членение, по средней плоскости проходит масштабный гирих и орнаментированные надписи, по верхней части – эпиграфический фриз.

Ключевые слова: мавзолей Ахмета Яссауи, архитектурный объем, Амир Темур, город Яссауи, купола, порталы, геометрия, орнамент.

Использованная литература

1. К.М. Байпаков. Локализация городов казахского ханства //Известия национальной академии наук Республики Казахстан. - Алматы: №5. 2014. -78 с.
2. <http://zerrspiegel.orientphil.uni-halle.de/t1369.html>
3. В.А. Ахмадуллин. Деятельность советского государства и духовных управлений мусульман по организации паломничества (1944—1965): анализ исторического опыта и значение для современности. -М.: Исламская книга. 2016. -104 с.
4. Южно-Казахстанская область: Мавзолей Ходжа Ахмета Яссауи, XIV век.
5. История Казахстана в персидских источниках. -Алматы: Т.5. Дайк-Пресс. 2007. -87 с.
6. Южный Казахстан, древний город Туркестан.