



## Gur-Emir Mausoleum is a Masterpiece of Timurid Architecture

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### ABSTRACT

The article provides information about the mausoleum of Amir Temur in Samarkand, the history of its creation, planning and compositional solutions, mausoleum structures, decoration of facades and interiors, restoration of the monument, its influence on the construction of similar buildings in other parts of the world.

### ARTICLE INFO

Received: 8<sup>th</sup> January 2023

Revised: 8<sup>th</sup> February 2023

Accepted: 22<sup>th</sup> March 2023

### KEY WORDS:

Mausoleum, Amir Temur, architecture, khanaka, madrasah, Muhammad Sultan, portal, minarets, structures, dome, drum, decor, interior, stone gravestones, geometric and floral ornaments.

The term "art of the Timurid era" has widely entered the scientific and popular literature, as it defines the territorial and chronological boundaries for artistic culture within the possessions of the great dynasty, covering the territory of Central Asia, Afghanistan and Iran in the last quarter of the XIV-XV centuries. It was a time of grandiose geopolitical changes, the flourishing of intellectual life and spiritual pursuits, interaction and mutual enrichment of traditions of different peoples, their dialogue, and of course, the construction of majestic architectural masterpieces.

During this period, in the capital of Timur's empire - Samarkand, as well as Shakhrisabz, Bukhara, Turkestan, Herat, and in some other major cities and environs, grandiose structures were being built. Architecture rightfully made a stunning impression, speaking of the greatness of the ruler [3].

Architectural monuments of the reign of Timur amaze with beauty, harmony of colors, perfection of construction equipment. Thus, significant urban planning works were carried out in Samarkand, wonderful mausoleums were built in the Shahi-Zinda necropolis, the Bi bi-khanim cathedral mosque, the Gur-Emir tomb, in which Sahibkiran himself was buried [4].

One of the best examples of Timurid architecture is the mausoleum of Amir Timur. The main architect of the mausoleum was Mahmoud Isfahani, a native of the Iranian city of Isfahan [10].

Its construction was started in 1403 at the behest of the mighty ruler Tamerlane for his beloved grandson Muhammad-Sultan, who was to become the ruler of Transoxiana after the death of Temur [11]. However, Muhammad Sultan died before Timur.

The name "Gur-Emir", which means "tomb of the Emir", was given to the tomb a year later, when Amir Temur himself was buried in it next to his grandson under a black jade monolith.

The place for this was chosen not far from the khanak and the madrasah of Muhammad Sultan, erected by him during his lifetime. The madrasah was small with a typical courtyard composition and was intended

for teaching children of the Samarkand nobility. Opposite the madrasah there was a khanaka with a central hall and cells – hujras. Both buildings were erected by order of Muhammad Sultan and were to become the center of Islamic education [11]. But the sudden death of Muhammad in 1403 led to a change in the purpose of the complex.

#### Fragment of the portal of the mausoleum of Amir Temur



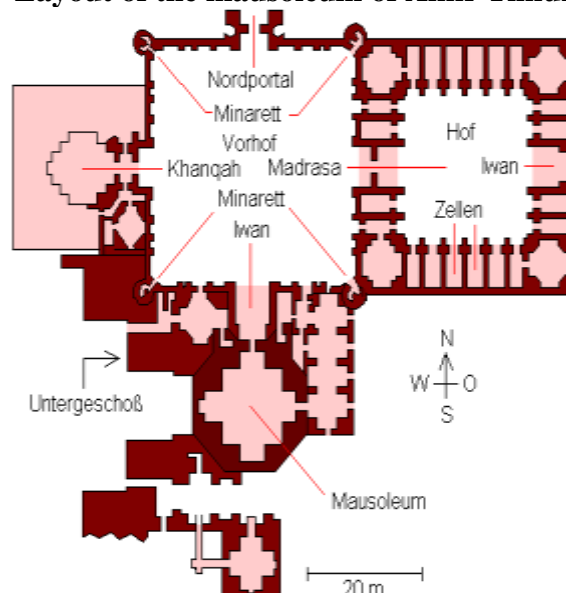
The entrance portal, richly preserved and covered with carved mosaics, led to a square courtyard surrounded by high walls, with arched shallow niches in two tiers and tall slender shallow niches in two tiers and tall slender minarets at the corners.

On the east side of the courtyard adjoined a madrasah, and on the west - a khanaka, a domed mosque with rooms for dervishes.

The facades of both buildings were turned into a small quadrangular courtyard, which was completed by high walls from the south and north. In the center of the northern wall, a portal with an entrance to the courtyard was arranged. In the center of the southern wall was a deep arched niche.

Khanaka and madrasah, a domed mosque with rooms for dervishes at present, unfortunately, resemble only ruins [11].

#### Layout of the mausoleum of Amir Timur



Both minarets on the south side have survived to this day half of their original height (they were restored by Samarkand restorers in 1996). Two northern minarets collapsed during an earthquake in the XIX century. The extension of the Tsarevich's mausoleum was started to the southern wall of the Muhammad Sultan ensemble.

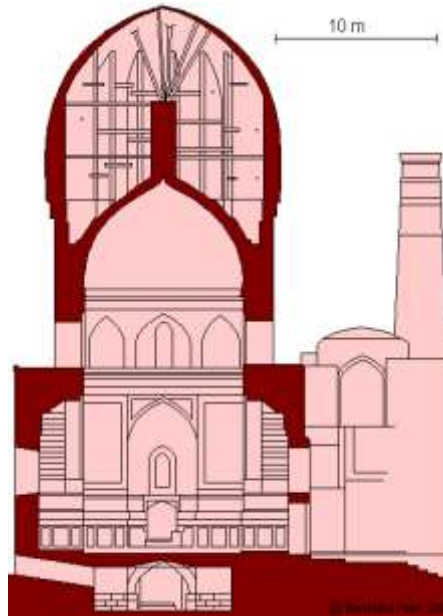
The composition of the mausoleum is distinguished by its monumentality, which is determined not only by its large size, but also by the beauty of three-dimensional forms.

The building on which the dome is built has the shape of an octagon. The northern wall by means of two pylons closes with the side walls of the ivan. A powerful drum is placed on the octagon, over which a majestic ribbed dome hangs.

The height of the dome is 12.5 m., the diameter at the base is 15 m.

The proportions of the building are such that the dome and the drum account for more than half of the total height of the building.

#### **Construction of the mausoleum of Amir Timur**



In the tomb, thanks to the high skill of the best creators of the East, indescribably beautiful decorative elements were created. The mighty ribbed dome of the mausoleum, made in the shape of an onion, lined with greenish-blue majolica, attracts attention. The outer side of the dome of Gur-Emir has 64 facets, which is equal to the number of years that Prophet Muhammad lived his earthly life.

A powerful drum supporting a giant onion also attracts the eye, and it is also very exquisitely and richly decorated with ornamental motifs and inscriptions containing praises to Allah, made on a background of yellow terracotta facing bricks. The inner part of the drum owes its particularly majestic appearance to the work of the great master Muhammad ibn Mahmud Isfahani. The design is dominated by blue and gold colors, which literally dazzle with their brightness. The entire architectural composition of the Timurid tomb exudes solemnity, which, however, is not surprising, considering what great figures rest here

#### **Dome and drum of the mausoleum of Amir Temur**





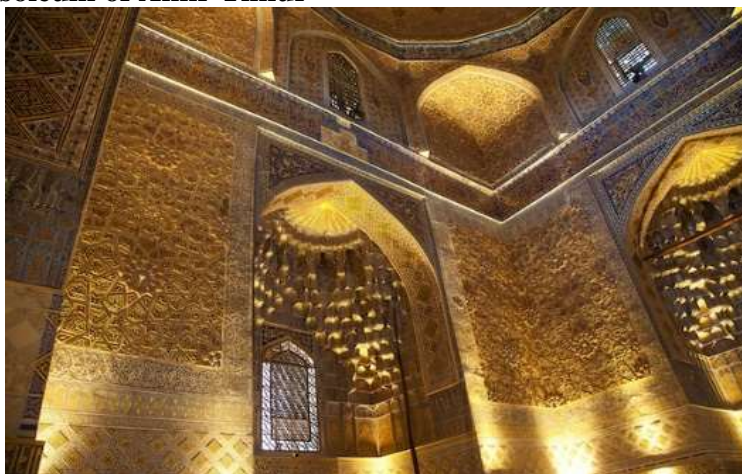
The builders of the mausoleum of Amir Timur proceeded from a cubic structure-a portal building, but they improved it in static and seismic terms. Indeed, when using arched sails, the load from the dome structure is distributed to 8 points of the wall. Filling the sails with half of the closed arch prevents the overturning of the sail arches and evenly distributes the forces on the walls.

The interior of the mausoleum is also characterized by monumentality, harmony of proportions. The height of the interior is 23 m., the length of the walls of the quadrangle is 10 m. The ratio of the length, height of the walls and the entire height of the room is 1x1, 1x2x3. In order to increase the space, the builders introduced niches that gave the interior a cruciform plan, the width (4.3 m) and depth (2.8 m), the height of the niches (9m) reach almost to the top of the walls.

The richness of the interior decoration is also striking. In the lower part there is a high panel of onyx tiles (once covered with ornamental painting in blue and gold). Above the panel is a stalactite marble cornice and frieze with Arabic inscription, surahs from the Koran.

During this period, when the mausoleum was being decorated, the medieval art of stone carving reached its artistic heights. This can be seen in the interior of the mausoleum, by the panjara window grilles, also carved from marble.

### **The interior of the mausoleum of Amir Timur**



### **The interior of the mausoleum of Amir Timur**

The interior decor of the mausoleum reflects compositional techniques characteristic of the turn of the XIV - XV centuries, solid decorative coating, saturation with patterns and color, luxury [9].

On the walls there are huge panels with a large star-shaped girih. There are four of them – one in each corner of the mausoleum.



The inscriptions, clearly bounded by stripes, have their own ornamental composition; the panel, the plane of the walls, the tier of tromps, the inner dome, the principle of decor placement are inherent in the architecture of Central Asia of the period under consideration.

### **The interior of the mausoleum with tombstones**



The marble lattice with a variety of ornaments and stone tombstones - decorative tombstones perfectly combine with the splendor of the interior. The graves themselves are located just below, under the decorative tombstones, under the mausoleum itself [9].

In 1425, Timur's tombstone was made of dark green jade, taken from Mogolistan during Ulugbek's campaign. In 1447, by order of Ulugbek, the body of Shahrukh, Timur's son, was transported from Herat. At the feet of Timur is the tombstone of Ulugbek. The largest tombstone belongs to the spiritual mentor of Temur - Mir-Seyid Bereke.

Daylight softened, passing through the colored glazed lattice windows, lamps and lampions descending from the center of the dome and at the corners, filled the interior with a soft light in which golden ornaments flickered.

According to Timur, the grandiosity of the architectural forms was supposed to inspire an idea of the greatness of the persons buried in the mausoleum [11]. And in fact, according to art critics, "this monument, like perhaps no burial structure in Central Asia, generates lofty thoughts about the greatness of human affairs."

### **Interior architecture**



Back in 1925, M.F. Mauer (restoration engineer) a very interesting reinforced concrete structure was introduced on independent supports, between the stone floor and the vault, which perceived the entire load that pressed on the vault. This made it possible to guarantee the safety of the tombstone and the vault for many years, and at the same time preserve the internal appearance of the mausoleum and crypt [2]. It was also timely



that in 1936. Mauer reinforced with iron rings the cracked huge drum and the ribbed dome of the Mausoleum of Gur-Emir in Samarkand. In 1943-1950, under the leadership of B.N.Zasytkin, complex work was carried out on the restoration of the Gur – Emir mausoleum in Samarkand. The main ones were the work on the completion of the structural reinforcement of the ribbed dome and the restoration of its cladding [5]. Folk craftsmen also participated in the work: Akram Ukmurov, Muhammad Yunusov and his teams. B.N. Zasytkin often mentioned in conversation that without the participation of masters, restoration would have been impossible [2].

Restoration work was resumed in the 90s in connection with the anniversary of Amir Temur. Onyx panels, gilding, murals are complemented. A luxurious chandelier hangs from the ceiling, as in the past. And in the crypt under the floor of the mausoleum, decorated very sparingly, there are burials arranged in the same order as decorative tombstones.

The interior was decorated with wooden doors with fine fine carvings and inlaid with mother of pearl and silver.

### **Interior decor**



The corner sections of adjacent walls are decorated with huge compositional large geometric ornaments, which further contributes to the perception of them as powerful foundations.

For the upper parts of the interior, more elegant ornaments were used, visually facilitating the overlap. Intertwined golden stems rise from the bottom of the dome, running down to its top [8].

They lay on a light, as if airy bluish background, formed by thousands of small ultramarine spirals deposited on a white ground. The bases for gilded ornaments were made in different techniques - from papier-mache, slightly buried in the ground, cast from ganch and glued with paper.

### **Mausoleum Dome Decor**



The same dome was built in St. Petersburg in 1913 on Kronverksky Avenue next to the Peter and Paul Fortress on a mosque built under the leadership of the Emir of Bukhara. The artist-architect Nikolai Vasiliev

and the academican of architecture Alexander von Ganguin repeated the shape of the dome of the tomb of Amir Temur. There are no other analogues of the dome in the world.

The grandeur and lightness of architectural lines and forms, the richness of multicolored mosaics, the monumentality and harmony of proportions, the painted decorative coating of the interior made the mausoleum of Amir Temur a unique monument of Central Asian architecture [7].

The mausoleum of Amir Temur served as a prototype for the famous monuments of architecture of the Mughal era: the mausoleum of Emperor Hamayun (Humayun) in Delhi and the mausoleum of the Taj Mahal in Agra, built by the descendants of Temur, who at one time were the ruling dynasty of Northern India.



Thanks to the high skill and talent of architects, craftsmen, achievements of construction equipment, compositional techniques and artistic techniques characteristic of the turn of the XIV - XV centuries, the thoughts of the mighty Amir Temur, a masterpiece of architecture, a mausoleum built for centuries, a reminder to contemporaries of the great people buried here [6].

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