

RESTORATION OF MEMORIAL MONUMENTS

Akmal O'Imasov

Ilmiy rahbar.

Arxitektura fanlari buyicha falsafa doktori (PhD), dotsent.

Indira Jumabaeva

Kamoliddin Bekzod nomidagi milliy rassomlik va dizayn instituti magistranti.

<https://doi.org/10.5281/zenodo.18780702>

***Annotation.** This article analyzes the theoretical foundations of the restoration of memorial monuments, the importance of preserving historical monuments, and modern restoration methods. It also reviews the processes of preserving and restoring historical architectural monuments in Uzbekistan, international experience, and scientific approaches.*

During the restoration process, special attention is paid to the issues of preserving authenticity, not destroying historicity, and restoring the original appearance of the monument as much as possible.

***Keywords:** memorial monument, restoration, conservation, reconstruction, architectural heritage, historical monuments, authenticity, cultural heritage, scientific approach.*

Memorial monuments are an invaluable heritage that embodies the rich history and culture of each nation. In particular, historical monuments in the cities of Samarkand, Bukhara, and Khiva are cultural treasures of not only national but also world significance. Their preservation and transfer to future generations is one of the urgent tasks.

Restoration is a process aimed at scientifically restoring, strengthening, and preserving the original state of historical and architectural monuments. Restoration is closely related to the concepts of conservation and reconstruction. While conservation is aimed at preserving a monument in its existing state, reconstruction means restoring its lost parts.

One of the main principles in the restoration process is to preserve authenticity. That is, it is important to keep the historical appearance and building materials of the monument as much as possible.

During the years of independence, many historical monuments were repaired and restored in Uzbekistan. In particular, large-scale restoration work was carried out in the Registan complex, Ark Castle, and Ichan Castle. Along with national traditions, modern technologies were used in these processes.

Restoration work is carried out on the basis of a special scientific project. First of all, the technical condition of the monument is studied, historical sources are analyzed, and then restoration work is carried out step by step. Today, innovative methods such as 3D modeling, laser scanning, and digital archiving are used in the restoration process.

However, in some cases, incorrect reconstruction work can reduce the historical value of the monument. Therefore, each restoration project must be carried out on the basis of in-depth scientific analysis and international standards.

The process of restoring memorial monuments is based on international principles. The Venice Charter, adopted in 1964, is one of the important documents on the preservation of historical monuments.

Based on this document, it is recommended to preserve the historical layers of the monument during the restoration process, abandon artificial decorations, and use a scientifically based approach.

Today, there are special requirements for the preservation of monuments included in the UNESCO World Heritage List. For example, the historical center of Samarkand and the historical area of Bukhara are protected at the international level.

In international experience, the restoration schools of Italy, France and Turkey occupy a special place. In particular, the experience of preserving ancient structures in Rome serves as a model for restorers around the world.

Restoration of memorial monuments is carried out in several important stages:

1. Scientific research stage

Study of archival materials

Analysis of historical sources

Determination of the initial appearance of the monument

2. Technical diagnostics stage

Inspection of the condition of building materials

Study of the strength of the foundation

Identification of damaged parts

3. Project development stage

Creation of a restoration concept

Selection of modern technologies

Preparation of a cost estimate

4. Practical restoration stage

Strengthening work

Scientific restoration of lost elements

Decoration and final conservation

In Uzbekistan, the protection of cultural heritage has risen to the level of state policy. In particular, the restoration work carried out in the Registan complex is aimed at restoring national architectural traditions. Special attention is also paid to preserving the historical environment in the Ichan Kala area.

The restoration process combines the experience of local craftsmen and modern engineering approaches. This ensures the long-term preservation of the monuments.

Currently, the following innovative methods are widely used:

- 3D laser scanning
- Digital modeling
- Georadar inspection
- Use of nano-materials
- Virtual reconstruction

These technologies allow us to determine the original structure of the monument and adhere to the principle of minimal intervention. A number of problems may arise during the restoration process:

- Lack of historical documents

- Lack of financial resources
- The risk of improper reconstruction
- The negative impact of climatic conditions

To solve these problems, it is important to train qualified specialists, strengthen international cooperation and introduce a scientific monitoring system.

Restoration of memorial monuments is a complex, multi-stage and highly responsible process. It serves not only to preserve historical monuments, but also to strengthen national identity and increase tourism potential.

Through a scientifically based, careful and modern approach, the memorial heritage can be passed on to future generations in its entirety.

The restoration of memorial monuments is not only a construction process, but also a responsible scientific activity aimed at preserving cultural heritage. Through the proper preservation and restoration of historical monuments, it is possible to strengthen national identity and enrich the world's cultural heritage.

References:

1. Yuldasheva, D. U. *O'zbekiston madaniy yodgorliklarining muhofazasi tarixi.*— Sovet va mustaqillik davrida yodgorliklarni saqlash jarayonlari va birlamchi adabiyotlar.
2. *O'zbekiston me'moriy yodgorliklarini asrab-avaylash muammolari*, N. Goncharova & U. Saidumarova, *Shaharlarni rivojlanish tendensiyalari va istiqbollari (2023).*— O'zbekiston me'moriy yodgorliklarini restavratsiya va konservatsiya bilan bog'liq ma'lumotlar.
3. Dusatova, N. R. (2025). *Problems of Preservation and Restoration of Architectural Monuments and Cultural Heritage Sites* — maqola (International Journal of AIAD).— O'zbekiston arxitektura yodgorliklarini restavratsiya qilish bo'yicha holat tahlili va asosiy manbalar.
4. *Arxitektura yodgorliklarini ta'mirlash*, X. Sh. Po'latov (darslik).— Nazariy va amaliy yondashuvlar bo'yicha o'quv qo'llanma (Toshkent, 2009).
5. *Tarixiy me'moriy obidalarni saqlash va restavratsiya uslublari* — O'zbekiston bo'yicha tadqiqot referati.