

THE ROLE OF THE EXPERIENCE OF WORLD COUNTRIES IN THE RESTORATION OF ARCHITECTURAL MONUMENTS OF UZBEKISTAN



Durdona Azamova

PhD student at Tashkent University of Architecture and Civil Engineering

erkinovadurdona93@mail.ru

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Abstract: This article analyzes the experience of Germany, Turkey, Iran and other countries that have a leading position in the restoration of architectural monuments among the world's countries. Learning from their achievements and shortcomings, ways of applying them to the restoration processes of architectural monuments in Uzbekistan are sought. Based on the needs of the time, the role of world experience in organizing the restoration of architectural monuments using advanced technologies and using monumental buildings as tourist attractions is studied.

Keywords: Architectural monument, Giebelhaus, reconstruction, Hagia Sophia (Ayasofya), Byzantine Empire, Constantinople, dome, Isidore, Anthemus, mosaic surfaces, architectural decoration, Great Mosque, advanced technologies.

Аннотация: В статье анализируется опыт Германии, Турции, Ирана и других стран, занимающих лидирующие позиции по реставрации памятников архитектуры среди стран мира. Изучая их успехи и недостатки, ищутся пути их применения в процессах реставрации архитектурных памятников в Узбекистане. Исходя из потребностей времени, будет изучена роль мирового опыта в организации реставрации памятников архитектуры с применением передовых технологий и использования монументальных зданий в качестве туристических объектов.

Ключевые слова: Памятник архитектуры, Гибельхаус, реконструкция, Айя-София, Византийская империя, Константинополь, купол, Исидор, Антемус, мозаичные поверхности, архитектурный декор, Великая мечеть, инновационные технологии.

Annotatsiya: Ushbu maqolada jahon mamlakatlari orasida me'moriy yodgorliklar restavratsiyasi bilan o'z mavqeiga ega Germaniya, Turkiya, Eron va boshqa davlatlar tajribasi tahlil qilinadi. Ulardagi yutuq va kamchiliklardan saboq olgan holda O'zbekiston hududi me'moriy yodgorliklarini ta'mirlash jarayonlariga tatbiq qilish yo'llari izlanadi. Zamon talabidan kelib chiqqan holda, me'moriy yodgorliklarni ilg'or texnologiyalar orqali ta'mirlashni tashkil qilish hamda yodgorlik binolaridan sayyohlarni jalb qiluvchi maskan sifatida foydalanishdagi jahon tajribasining o'rni o'rganiladi.

Kalit so'zlar: Me'moriy yodgorlik, Gibelhaus, rekonstruksiya, Aya Sofiya (Ayasofya), Vizantiya imperiyasi, Konstantinopol, gumbaz, Isidor, Anthemus, mozaik yuzalar, me'morchilik bezaklari, Ulug' masjid, ilg'or texnologiyalar.

Introduction. The history of paints used in architecture around the world has changed in an interconnected way. Trends used in the architecture of countries have been formed and enriched over the centuries. Architectural decorations have also undergone a change in style due to significant changes in the political life of countries. Large-scale work is being carried out to preserve architectural monuments and extend their "life". In the scope of these works, the role of the restoration of world architectural monuments is currently of great importance.

Methods. In the restoration of architectural monuments in Uzbekistan, we can learn a lot of new knowledge from European countries, such as Germany. In Germany, we can take the

medieval building of the Giebelhaus (Giebelhaus - German "giebel" - pediment, "haus" - house) in the city of Parchim. After restoration, the ancient building was revived as a rehabilitation center for people with psycho-physiological problems. In this case, restoration work was carried out on both the upper facade and the interior of the building.

The half-timbered Giebelhaus in Parhim was built in 1601-1604. The owner of the house was a councilor and merchant, and its entire size indicated the high status and wealth of the owner of the building. The building, which faced the city hall, was built of red brick. There were many storerooms on the upper floors, and the social center of the house was a large hall in the middle, connecting the two floors. Logistics operations, trade operations, family dinners, etc. were carried out here. In the 16th-17th centuries, such historic buildings fell out of fashion, and in the 18th century, the owner of the house slightly extended the roof of the first floor and covered it, and a wheel was installed in the attic area to transport goods to the second floor. Only in 2016, after a very long process, the old building, which could not attract tourists, was transformed into a new, functional building. The main goal was to preserve the structure of the building. All the colors of the building were restored to their original state. The historic building's ancient staircase, windows, and doors were preserved. The roof shape was reconstructed, and new tiles were laid. An elevator was installed in the modern block of the building, benches for relaxation were installed in the courtyard, and bird feeders were installed on part of the building wall.[1]

In recent years, the New Museum in Berlin, Germany, has been restored. Its design was drawn up by F.F. Stüler in 1862. The new architect, David Chipperfield, was tasked with preserving the building and not damaging its historicity.[1] He came up with the idea of strengthening the historical part of the museum and restoring the remaining damaged part. Interestingly, the newly built part was clearly distinguished from the historical part. The ancient part was not polished with modern materials to preserve its historical appearance, but rather its preserved fragments were strengthened, restored, and it created an interesting appearance together with the modern part.

Results. We can take the idea of effective use and re-functionalization of monuments from the German restoration. In this case, it is necessary to look for alternatives that are suitable for their functionality without damaging the monument. It is possible to give a second life to neglected monuments and turn them into tourist attractions. The only nuance is that monuments included in the UNESCO list are excluded, otherwise they will be removed from the list of world-protected monuments.

Turkish restorers have made great progress in protecting their architectural monuments. In the restoration of the Hagia Sophia Mosque in Istanbul, a model using advanced technologies that can serve as an example to the world is being used, said Coşkun Yılmaz, director of the Istanbul Culture and Tourism Directorate, to Anadolu Agency.

Hagia Sophia, Hagia Sophia (Ayasofya) (Turkish: Ayasofya) is a large cultural, historical mosque and former church located in Istanbul, Turkey. The current structure was built by the Byzantine Emperor Justinian I between 532 and 537 as the Christian church of Constantinople for the Byzantine Empire.

The building was designed by the Greek geometers Isidore of Miletus and Anthemius of Tralles[3]. Hagia Sophia was also damaged by the earthquake of 1894. Some cracks appeared in its walls and large mosaic surfaces fell off along with the plaster. During the years of the Constitutional Monarchy, Western architects such as Marangoni, Jackson, Propper and Prost were asked to study the situation, and even preparations were made for a renovation under the supervision of the architect Kamoliddin Bey. Hagia Sophia underwent minor renovation and reinforcement works in the early years of the Republic (1926). Shortly after the work began, on 2 November 1934, the Council of Ministers decided to open Hagia Sophia as a museum. Thus, the building began to operate as a museum on 1 February 1935. In 1996, it was inscribed on the World Heritage List. From 1997 to 2002, renovations were carried out on its dome and minarets. By presidential decree dated July 10, 2020, it was decided to transfer Hagia Sophia to the Presidency of Religious Affairs and open it for worship. Thus, eighty-six years after it was converted into a

museum, Hagia Sophia was reopened for worship with the Friday prayer on July 24, 2020 under the name of the Great Mosque.[2]

The example of Hagia Sophia provides an example of Turkey's experience in the restoration of mosques, new technologies, and ways to use ancient mosques not only as museums, but also as a place of worship for tourists and local residents. Repairs and restoration work are still ongoing in various parts of the building. Hagia Sophia is one of the most visited places of worship in Turkey. It is visited by several million people annually.

Discussions. The abundance of similarities in the architectural monuments of Central Asia and Iran is due to several factors. Several medieval architectural monuments were created by craftsmen, architects, and artists from Iran.

Persepolis is an ancient city in Iran, located 55 kilometers northeast of Shiraz. Its history began more than 2,500 years ago. Today, the remaining buildings of Persepolis, in particular the palaces of Darius I and Artaxerxes III, the Trypilon and the Hall of a Hundred Columns, the treasury foundation and the residential buildings, are included in the UNESCO World Heritage List. On 29 January 2019, the fifth Ashgabat Silk Road Coordination Committee adopted resolutions calling for increased attention. The most obvious threat is industrial pollution of the air and the environment. The expansion and growth of settlements in and around the city of Mervdesh are of no small importance [4]

The property and conservation area are also subject to local laws with their own regulations. A management plan was introduced in 2001, which includes planning of boundaries, conservation area, land ownership, conservation priorities and management measures.

The Persepolis Research Base, a management office and a conservation office established in Persepolis in 2001, is responsible for the preservation, restoration, reorganization, and presentation of the monument property. Education and training are offered by the office in collaboration with universities and research institutes in Iran and abroad. Financial resources for Persepolis are collected through national and provincial budgets, as well as entrance fees to the building.[5]

Persepolis is a large and ancient architectural monument in Iran, and its restoration and protection are designed as a holistic system. External and natural factors that can compromise its preservation are taken into account.

Summary. New techniques in the restoration of historic buildings have revolutionized the sector. These are some of the most commonly used strategies:

- 3D scanning and BIM modeling: allow for detailed analysis and precise planning of interventions.
- Use of compatible materials: using mortar and stones similar to the originals ensures harmonious integration.
- Invisible structural reinforcement: use of carbon fiber or steel systems that strengthen without changing the external design.
- Energy efficiency systems: combining thermal insulation and passive ventilation to reduce energy consumption [6]

Some notable examples of successful restorations:

1. St. Mark's Basilica in Venice: restored using traditional materials and modern conservation techniques.
2. Rijksmuseum in Amsterdam: adapted to modern needs while preserving its historical value.
3. Sagrada Familia in Barcelona: a vivid example of how modern technology can help successfully complete the restoration of a historical monument [5]

The use of modern technologies in the field of restoration is currently of great importance. Architectural monuments are such treasures that, if they are lost, they are unique buildings that cannot be restored in an alternative way. Because they preserve the handiwork of advanced architects of their time, the building materials of that time, and knowledge of the construction techniques of the period. That is why it is important to pay attention to them, correctly assess them,

and develop methods of restoration. Choosing the right ones, taking measures to pass them on to future generations, is one of the urgent issues.

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7. Фамилия, имя, отчество автора(ов): A'zamova Durdona Avazjon qizi
8. Должность, ученая степень, ученое звание: Toshkent Arxitektura Qurilish Universiteti 3-kurs doktoranti
9. Место работы/учебы (полное наименование учреждения, без сокращений), город: Toshkent Arxitektura Qurilish Universiteti. Toshkent
10. Тема статьи: The role of the experience of world countries in the restoration of architectural monuments of Uzbekistan
11. Порядковый номер направления: 1
12. Электронная почта автора: erkinovadurdona93@mail.ru
13. Номер телефона автора: +99897 446 66 93