



**EXPERIENCES IN THE PROTECTION OF ARCHITECTURAL
MONUMENTS IN SAMARKAND IN THE XIV CENTURY**

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Annotation

The article proposes experiments on the protection of an architectural monument of the laboratory, one of the historical and architectural monuments of Samarkand.

Keywords: Architectural monuments, architectural form, architectural design, Summer Academy, hydrogeology, building materials, construction, card index, architectural monuments.

Introduction

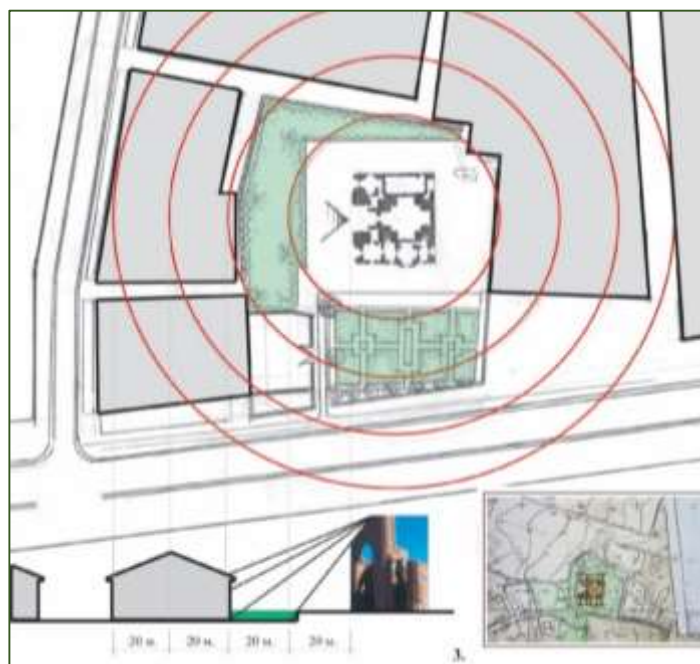
The meeting, organized by the Summer Academy on the protection of architectural monuments, was attended by about 60 Uzbek and German students, professors and associate professors. The project leader is Sven Vallash. The purpose of the event is to provide Uzbek students with experience in the field of protection of architectural monuments on the example of the Ashratkhana in Samarkand - XIV century [5], as well as to acquaint them with the technological process and methods of repair. However, the proposals made at the meeting were not implemented.

The Main Part

Given the above purpose of the Summer Academy, it is important to study in detail the comprehensive constructive and artistic solutions of the historical and architectural monuments of Uzbekistan. After that, it will be possible to consider the experience of restoration of monuments with analysis and practical suggestions.



a)



b)

Figure 1. Ashratkhana in Samarkand is an architectural monument of the XIV century. a) general view, b) designation of the protected area.

In the project of a group of architects on the theme "Strengthening of the monument (construction design, typology of the monument, options of the initial dimensional-planning structure)" damage analysis, recommendations for storage and use of the structure are considered.¹

In addition, the Ashratkhana in Samarkand - a general view of the XIV century architectural monument, as well as the views of experts in the field on the definition

of the protected area of the historical monument, based on which the project of protection of the monument was proposed [9] which in turn can be reflected in the following views.



a)



b)

Figure 2. 14th century Samarkand. The project of the ashtray monument a) before the main reconstruction, b) after the main reconstruction

The task of this group is to develop the volume-planning structure of the monument, research documents, constructions and permissible measures for its preservation, including [2]:

- Search for information, study of sources: archival materials, literary sources, historical photographs, measurements and documents on the object, drawings, analysis of damage;
- Development of additional documentation on the object (on the spot), determination of the time of onset of the demolition process, its intensity, representation of the results in the form of a three-dimensional model, documentation of various shapes of arches and domes;
- Comparison with other mausoleums of Samarkand in terms of construction history and construction technology (plan, profile, shear, dome construction) [3];
- Depiction of the monument in the form of a drawing (plan of the place, silhouette) and description of spatial architecture (perspective, isometry, sketch by hand), as well as selected details (manual measurement);
- Based on the results of the analysis of the condition of the building, issues related to the use and preservation of the monument were discussed (for example, a ruined monument, a museum-construction site, an exhibition room, a viewing platform).

Discuss the necessary construction activities (strengthening, maintenance, restoration, reconstruction, expansion or reconstruction) and the work schedule [7]. The purpose of the project of group 2 architects on the theme "Strengthening the architectural decoration" (documents on the description of the condition of the building, analysis of results and analysis of materials, the concept of diagnosis and repair of the building): to understand and study the elements, to identify the materials and properties of structures, as well as monuments, to study the object, to develop the ability to understand the causes, to discuss and identify the need for repair measures [8].

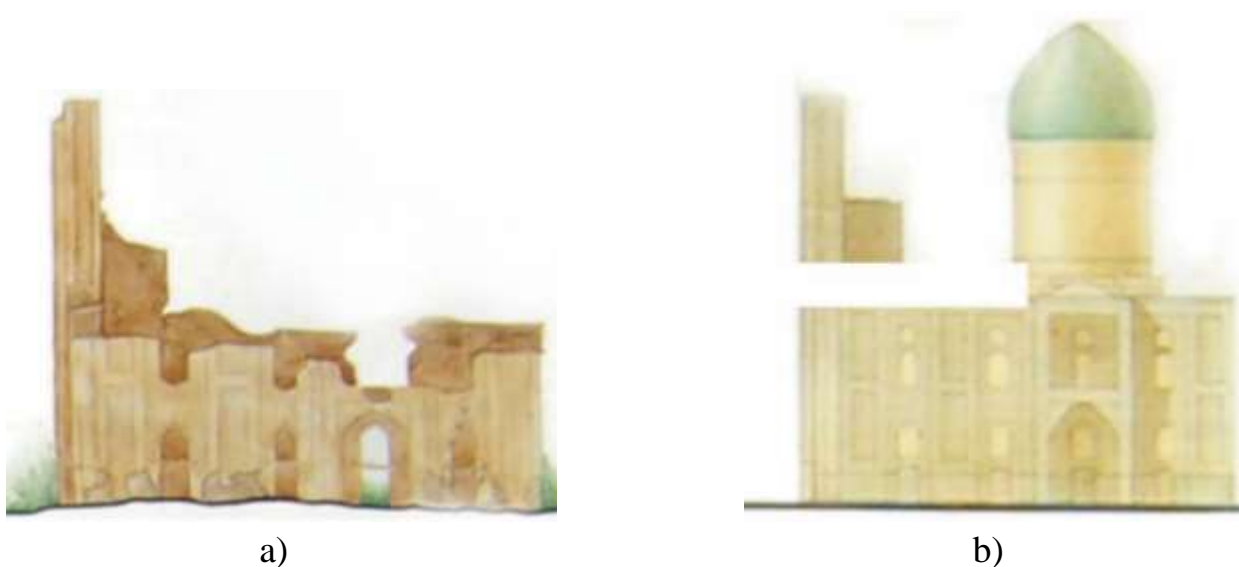


Figure 3. 14th century. Samarkand. The condition of the restaurant monument before a) side reconstruction, b) post-reconstruction view project

The task of this group is to study the condition of the monument, focusing on the development and repair of a set of activities for individual parts of the object, including:

- Representation of the object: general concepts of historical techniques of bricklaying and decoration techniques, as well as a brief description of the condition of the monument;
- General explanation of the basis of the analysis of research materials methods. Development of basic documents (plans, descriptions of rooms and walls, as well as



measurements), identification and survey of sites, description of damaged parts of the monument;

- Designation, description and inclusion in the file of various construction and decorative materials (images, wall patterns, decorative ceramics); determination of basic physical-construction and chemical properties and properties of materials;
- Documentation of damage (taking into account statistical, chemical-construction, hydrogeological and climatic parameters) and its inclusion in the card index, development of documentation on damage and creation of catalogs with damage pictures of the monument;
- Development of a research program for damage and material analysis, on-site analysis of materials in the laboratory of building materials [6-15].

Conclusion

In conclusion, it is possible to jointly evaluate the results of the study of the monument and discuss the possibilities of conservation and repair, the nature of the measures, the warnings on conservation. The result of the joint work was the development of a new strategy for the development of the monument's monument and its area of influence. In the final part of the Summer Academy, lectures were given and certificates were awarded.

References

1. Sharafuddin ali Yazdiy. Zafarnoma. Editor-in-chief of "Sharq" publishing and printing concert. Tashkent. 1997 Page 221.
2. Uzbek Soviet Encyclopedia, Tashkent, 1972, Volume 2, page 207.
3. Ahmad Kamalov. Geometry Nashey Drevneyshey Architecture, Fan Publishing House, USSR. Tashkent. 1973y
4. G.A. Pugachenkova, L.I. Rempel, Vydayushchiesya pamyatniki arhitektury Uzbekistana, Tashkent, 1958, p. 117.
5. Ulugbek Abdurakhmanov (2020). Hazrati Imam Architectural Complex is a holiday of our people. American Journal of Engineering and Technology, 2 (11), 46-49.
6. Polat Zoxidov. "The Architectural Milky Way of the Timur Period". Tashkent. "SHarq" 1996y.



7. A.Kamolov "Geometry of our ancient architecture". Publishing house "Fan" of the Uzbek SSR. Tashkent 1973 y.
8. Salimov O.M., Abduraxmanov U.A. Rare Devonbegi Madrasah in Samarkand (restoration and repair) Architecture Stroitelstvo Dizayn. Nauchno-prakticheskiy journal. Tashkent architectural and construction institute 2020/1.
9. Muslimovich A.S. and dr. Methods of formeniya arhitekturnoy shkoly Ferganskoj doliny // American magazine prikladnyx nauk. - 2020. - T. 2. - №. 12. - S. 21-25.
10. Zikirov, M. C., Qosimova, S. F., & Qosimov, L. M. (2021). Direction of modern design activities. Asian Journal of Multidimensional Research (AJMR), 10(2), 11-18.
11. Umarov, S. A. (2021). Development of deformations in the reinforcement of beams with composite reinforcement. Asian Journal of Multidimensional Research, 10(9), 511-517.
12. Davlyatov, S. M., & Makhsudov, B. A. (2020). Technologies for producing high-strength gypsum from gypsum-containing wastes of sulfur production-flotation tailings. *Academicia: An International Multidisciplinary Research Journal*, 10(10), 724-728.
13. Adilhodzhaev, A., Igamberdiev, B., Kodirova, D., Davlyatov, S., Marufjonov, A., & Shaumarov, S. (2020). The study of the interaction of adhesive with the substrate surface in a new composite material based on modified gypsum and treated rice straw. *European Journal of Molecular & Clinical Medicine*, 7(2), 683-689.
14. Akhrrarovich, A. K., & Muradovich, D. S. (2016). Calculation of cylindrical shells of tower type, reinforced along the generatrix by circular panels. *European science review*, (3-4).
15. Акрамов, Х. А., Давлятов, Ш. М., & Хазраткулов, У. У. (2016). Методы расчета общей устойчивости цилиндрических оболочек, подкрепленных в продольном направлении цилиндрическими панелями. *Молодой ученый*, (7-2), 29-34.