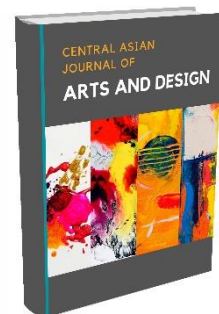


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The Basic Principles of the use of Building Materials in the Repair of Decorations of Architectural Monuments of Uzbekistan

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Annotation

This article discusses the types of building materials used in the repair of historical architectural monuments and how to repair them.

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Introduction

The concept of monuments also has two aspects in modern renovation: historical and artistic values. In turn, they have structural components. Historical value includes not only the value of information about the past but also the emotional value. Artistic value includes aesthetic aspects. The architectural monument reflects the period of its construction, its level of production, engineering knowledge. The typology of monuments reflects important aspects of the past. In particular, it provides valuable information on cultural ties. It is known that the history of ancient cities in Central Asia, such as Samarkand, Bukhara, Khiva, Shakhrisabz, Termez, is around 2500-2700 years [1-7]. The foundations of the buildings and structures of these cities, utilities, water and defence structures are mostly made of rock, which is the material at hand. Archaeological excavations have shown that these rocks are intact and strong.

Materials and methods

The ensemble of architectural monuments of Shahrisabz (ancient Kesh) deserves special attention. The most important architectural monument in this city museum is the Amir Temur Oqsaroy. Archaeological excavations at the Oqsaroy revealed that the complex was built of local building materials, including gravel. The fact that the rocks have a grade of 2000-3000 kg/cm², water absorption, resistance to cold, saline solutions, guarantees that they will not deteriorate for 700 years. It is known that clay has been the main building material in Central Asian architecture since ancient times. It was usually used as cotton or raw brick. Paxas were used as a ribbon or block raw bricks [8-19]. Due to this, the tape or block types of cotton are known. It should be noted that the technology of

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making baked bricks, although known to the peoples of Central Asia since ancient times, was not widely used until the ninth century.

From that time on, it was used in architecture as a kind of protective shell. For example, if we look at the construction of public buildings in the IX-XI centuries, we see that the walls of the building were built on the basis of cotton and raw bricks, and then both sides were lined with baked bricks [20-37]. Thus, the robustness of your device is increased. Later, the custom of painting the surface of these bricks became widespread. From the 11th to the 12th centuries, special bricks-tiles or baked clay rivets were used. Thus, the art of riveting (majolica), tile and tile began to be widely used in Central Asian architecture [38-47]. However, this does not mean that glazed ceramics appeared in architecture in the IX-XII centuries. This is evidenced by the fact that such fragments of material were found in the Soil Fortress (VI century) and other ancient monuments [45-49]. There are three main types of glazed ceramics used in architecture. The first is a rivet, in other words - majolica. There are two types: carved and smooth. The carved majolica is made of clay. It is then baked in a kiln and glazed. It's cooked again. Sometimes the decoration is glazed 2-3 times and re-glazed after each glazing. The result is a deep carved glazed ornament. The second type of rivet has a smooth surface. To make it, a piece of clay was made and a pattern was painted with mineral paints. Then the clay is baked. Then a piece of glazed clay of different colours was baked again. Rivets were widely used, especially in the XII-XIV centuries. The second type of glazed pottery is tile. They are simple in appearance and are made of baked bricks with glaze on one side. There are also types of tiles with a glaze on the surface of the plaster, which was used in the XVI-XVIII centuries. They range in size from ordinary baked bricks to small custom bricks. The third type of glazed ceramics used in architecture is tile. Koshinburush is a piece of glazed pottery used to make any Islamic or calligraphic pattern and the method of its use. These pieces of pottery are made of tiled bricks cut with a tesha (broken) or sharpened on a wheel. That is why it is called koshinburush. Tiles can be made not only from prefabricated tiles but also in small moulds from clay or special plaster in the required size.

Conclusion

All types of rivets and tiles can be glued directly to the wall and assembled by means of a mixture, this method is called 'chaspak'. Koshinburushs are made in special patterns, laid upside down.

Then they are poured with liquid plaster and special boards are made. These boards are then glued to the wall. Once installed, the gap between the wall and the tile is filled with the mixture, which is also called the adhesive method. However, medieval architects left special air ducts to prevent various salts from escaping the walls and walls. This method is called "khataba".

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