

UDC 7.01:747

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INNOVATIVE APPROACHES IN THE DESIGN OF MODERN ISLAMIC PLACES OF WORSHIP REPRESENTED BY SANCAKLAR MOSQUE IN ISTANBUL

Bondarenko I., Yusupov P. Innovative approaches in the design of modern Islamic places of worship represented by Sancaklar Mosque in Istanbul. The article states that the main idea of the design solution of Sancaklar Mosque in Istanbul is to express spirituality through the contrast of light and shadow, materiality and aesthetics in order to create a sacred space to pray. Innovativeness of the project solution lies in both a technical solution — embedded placement of the mosque and a selection of composition means. This design is marked by full absence of traditional forms and luxuriant decorative ornamentation of the interior. The forms are made with broken lines similar to those which outline the lay of the land. The leading means are color and surface finish of natural stone as well as the light, which plays the main role in the drama of space. As the main approach we can define the contrast used in commensuration of materials, solutions of lightened and shaded areas, what makes a special praying space free of word vanity.

Keywords: mosque, design, light, contrast, stone.

Бондаренко І., Юсупов П. Інноваційні підходи у вирішенні дизайну сучасних мусульманських культових споруд на прикладі мечеті Санкаклар у Стамбулі. У статті визначено, що головною ідеєю дизайнерського рішення мечеті Санкаклар у Стамбулі полягає у вираженні духовності через контраст світла й тіні, матеріальності й естетики для створення священного простору для молитви. Інноваційність проектного рішення полягає як у технічному рішенні — заглибленому розміщенні мечеті, так і у виборі композиційних засобів. Дизайн характеризується повною відмовою від традиційних форм і пишного декоративного оздоблення інтер'єру. Формоутворення інтер'єру будується на використанні ламаних ліній, подібних до тих, що окреслюють рельєф місцевості. Провідними засобами є колір і фактура природного каменю, а також світло, котре відіграє провідну роль у драматургії простору. Як провідний прийом визначено контраст, котрий використовується

в зіставленні матеріалів, вирішенні освітлених і затінених ділянок, що формує особливий вільний від буденності молитовний простір.

Ключові слова: мечеть, дизайн, світло, контраст, камінь.

Бондаренко И., Юсупов П. Инновационные подходы в решении дизайна современных мусульманских культовых сооружений на примере мечети Санкаклар в Стамбуле. В статье определено, что главная идея дизайнерского решения мечети Санкаклар в Стамбуле заключается в выражении духовности через контраст света и тени, материальности и эстетики для создания священного пространства для молитвы. Инновационность проектного решения заключается как в техническом решении — заглибленном размещении мечети, так и в выборе композиционных средств. Дизайн характеризуется полным отказом от традиционных форм и пышного декоративного убранства интерьера. Формообразование интерьера строится на использовании ломаных линий, подобных тем, что очерчивают рельеф местности. Ведущими средствами являются цвет и фактура природного камня, а также свет, играющий ведущую роль в драматургии пространства. В качестве ведущего приема выделен контраст, используемый в сопоставлении материалов, решении освещенных и затененных участков, что формирует особое свободное от мирской суеты молитвенное пространство.

Ключевые слова: мечеть, дизайн, свет, контраст, камень.

Background. Islamic countries are rich in artistic past, embodied paintings, architecture or crafts. Nowadays design is getting a part of Islamic culture, too. **Actuality of the work** is caused by detection of connection between rules of the Islamic culture, long-held traditions in making places of worship and influence of the modern world onto their implementation.

Analysis of recent researches and publications. V. Bartold is the author who laid the basis for studying Islamic culture [1]. Issues of formation of artistic tradition are illustrated in O. Grabar's works [6]. A regular author of encyclopedic publications and researcher V. Voronina studied the architecture of ancient and medieval Central Asia, that has become a great contribution to studying of history of civil engineering of the whole Islamic world [2]. L. Mankovskaia, E. Atagar-ryev and other authors describe regional specific features of architectonics of Central Asia [3; 4].

A thesis work the Russian researcher T. Starodub is dedicated to studying of architecture types of medieval Islamic constructions, detecting of processes of their appearance and ways of their formation [6].

The analysis of the leading publication concerning the theme of the present work has shown that there are no scientific investigations dedicated to specific features of solutions of modern Islamic places of worship.

Purpose of the work is to systematize project approaches in the solutions of Sancaklar Mosque in Istanbul.

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Стаття надійшла до редакції 04.04.2016

Results. The level of development of modern technics and technologies influence significantly the formation of architecture and design. It should be noted that this influence involves such seemingly canonical spheres like church architecture. Today we can see active building of Islamic mosques, which are developed by the world's leading architect bureaus. Their solutions are distinguished by non-uniformity and innovativeness.

In 2012 in Istanbul the first in the world underground mosque — “Sancaklar“ Mosque was built that was entitled as “The best place of worship in 2013” on the world's festival of architecture. The architect of this structure is Emre Arolat. When developing the project he was inspired by the Cave of Hira, where the Prophet Muhammad received his first revelation. The size of the mosque is 1200 square meters and its capacity is about 650 worshippers.

The construction is located in the rocky terrain far from dwelling houses. High walls enclose the mosque and delineate a border between the chaotic outside world and the peaceful atmosphere of religious building. The architecture and approach to the artistic image of the mosque are of special interest. The author of the project placed the space of the mosque under the ground. The building, immersed into a hill, merges with the landscape and forms a separate secluded space. At the very top of the hill there is a minaret. From this minaret down the terraced slopes there are steps. The exterior solution is based on the use of the basic elements of the earth, such as stone and grass. Its structure resembles an amphitheater (Fig. 1). The surrounding landscape is very strict and laconic. An old olive tree that grows right on the territory of the temple is the only thing that disturbs chastity of the stone architecture. A path that runs down the hill leads to the main entrance (Fig. 2). It is worth to note that the stairs leading to the entrance is immersed into in the terrain. With this technique, causing emotional distress among parishioners, architects have identified human impact on nature. At the entrance there is a stone pool with water flowing down the floor. It maintains the illusion of a mountain landscape and masks the sound of the roads thereabout [7]. The mosque has no traditional crescent, and its minaret is shaped unusually for Muslim buildings.

The building fits in harmoniously with the landscape and the external world remains behind when visitors move down the slope and between the walls to enter the mosque. The project concept is based on a continuous tense playing between anthropogenic and natural objects. The contrast between the natural stone of stairs after the natural slope of the landscape and a thin concrete slab forming the canopy reveals this double bond. The solution of spaces in areas between the walls is as expressive as the structures themselves, which restrict them. Stone, wood, grass, and sky are set against at the angles that draw the eye and create an atmosphere of reflection.

The mosque has a complex elongated shape. The interior of the mosque like a cave space arouses reverence, inspires and encourages praying and staying alone with God. This dramatic atmosphere can be achieved through a combination of materials, selection of colors, architectonics of structures and contrasting light. The idea of the mosque project is the exclusive focus on the transmission of the essence of religious space. The mosque has no traditional windows. An important accent is the only crack in the ceiling, passing along the entire wall of the mihrab. Through this crack the daylight enters the twilight of the interior and artificial light in the evening. This emphasizes the direction of the qibla and focuses on this wall. A wall with the mihrab has a bias and down the surface of this wall the light spreads and borders it on across the floor. There are no decorations on this wall deliberately. Gaps and cracks along the wall of the qibla intensify prayerful orientation of the space and allow the daylight to penetrate into the prayer hall. The texture of the wall has its own rhythm, defined by vertical slots. And its light gray color calls for calm, without irritating or exciting (Fig. 3).

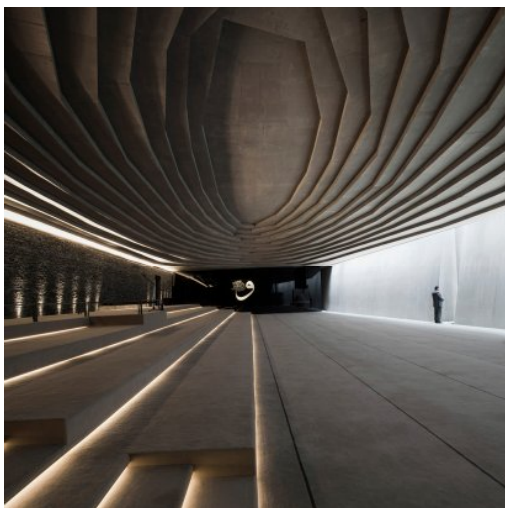
There are two niches in the wall. Mihrab is «carved» in the central part of the wall making in section a square. To the right of the wall there is an aperture. This is a minbar, where six steps lead to. The minbar, as well as the mihrab stands out by means of depth of the space and lighting. Both zones have no decorations.

The wall to the left of the mihrab is decorated with glossy mirror panels, this wall has a brow for muazzin calling for obligatory prayer. In the center of this wall on one of the panels there is a calligraphic inscription. The backlight creates a contrast between the black glass surface and white bright glowing inscription. Rear and right walls are decorated with decorative stone. Monumental in form, they have a significant roughness of the surface, accentuated by LED-backlight system mounted in the floor (Fig. 4).

There is no dome in this mosque, and the ceiling is a series of decreasing layers of geometric shapes cut out of reinforced concrete. His plane is divided into thirteen levels, which have sharp faceted shapes and resemble a topographical plan of this terrain. Neutral dark gray color comes in contrast to the brightly lightened wall of the quibla. Structural properties of the space are also emphasized by a five-level floor. The carpets, which are traditional for the interior of the mosque, have a light beige color. They have boundary lines for the rows of worshipers, which define the place occupied by a person or group of people.

Everything inside the mosque is elegant, simple and spacious: mosaic, colorful tiles, patterned carpets and other colorful decorations are completely absent. Glowing surah on the wall of black glass is the only thing to adorn the room.

The light in the interior is soft around the contour of the room, back and right walls are illuminated

*Fig. 1**Fig. 2**Fig. 3**Fig. 4*

by point-light lamps, revealing the texture of the stone. The color solution of the interior is monochrome giving a sense of security and peace.

The men's and women's parts are divided by a black screen in the prayer hall. A perforated screen provides confidentiality and supports visual contact.

Conclusion. It has been determined that the main idea of the design solution is to express spirituality through the contrast of light and shadow, materiality and aesthetics in order to create a sacred space to pray. Innovativeness of the project solution lies in both a technical solution — embedded placement of the mosque and a selection of composition means. This design is marked by full absence of traditional forms and luxuriant decorative ornamentation of the interior. The forms are made with broken lines similar to those which outline the lay of the land. The leading means are color and surface finish of natural stone as well as the light, which plays the main role in the drama of space. The contrast commensuration of materials and lightened and shaded areas produces a special praying space free of word vanity.

Final conclusion. Further research can be conducted with the aim to systematize project approaches in the solutions of modern Islamic mosques.

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