The Application of New Materials in Zhujiajiao Art Architecture

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Abstract. Zhujiajiao's artistic architecture, as an artistic architecture using new materials in Shanghai, has aroused the research of many scholars at home and abroad. This article takes the design of Zhujiajiao Art Center as the starting point, and explores the material function, functional division, and art evaluation of the art building. Functional evaluation of the building's field experiments and post-use evaluation of its material performance. It is explored that architecture is the carrier of experience. In space organization, how to express complete design skills in design works is the direction of our further research and the meaning of this article.

1. Introduction
Zhujiajiao Museum of Arts and humanities. It was built in September 2010. The museum uses oil paintings, sculptures and other forms of artistic expression to display the local history, culture, ancient charm and folk customs of Zhujiajiao, making the memory of Jiangnan ancient town in sharp contrast to the current urban water town. Designed by Zhu Xiaofeng, a famous designer, the Museum covers an area of nearly 2000 square meters. There are ten large and small indoor exhibition halls and five outdoor courtyards, which fully reflect the architectural style of the traditional houses in Jiangnan. The establishment of "Zhujiajiao Museum of Humanities and art" is a vivid example of cultural development after China's reform and opening up into the transition period. It is forward-looking and current, and of great significance to the protection and expansion of ancient towns.

Figure 1. General layout of Zhujiajiao
2. Analysis of current conditions

Zhujiajiao jiujiantang West garden is located in the international lakeside mansion area, the west side of Zhujiajiao ancient town in Qingpu District, with 800 Mu Dianshan Lake, Dadian lake and lesson planting garden in the north, and integrates the hardbound villa, hardbound apartment, commercial art center, cinema, Yuechun Hotel and hotel villa. With a population of more than 1000, the planned community will become the new urban center of Zhujiajiao. Zhujiajiao jiujiantang West Garden hardcover row area is about 195-400 square meters. Most of the rooms are designed with multiple terraces to facilitate the arrangement of different functions. Some rooms are attached with a large basement of about 100 square meters, which makes the available space more spacious. The Binhu Area where Zhujiajiao jiujiantang Xiyuan is located has attracted a large number of high-end people and brand developers to settle down, and has become the planning focus of Qingpu's "one city, two wings" policy. With the nearby Hongqiao transportation hub, Dianshanhu Avenue, rail line 17 (under planning) reaching the city center, the regional value space is huge.

2.1. Flat function room

Its historical situation is the relationship between the way of intervening the context and the consequent texture. A city is a regular or irregular geometric form composed of streets, buildings and public green space. The city is a whole, and the building, road, yard plot, greening and surface are the elements of the whole. Urban texture is the combination of many texture permutations in the city, and various permutations are the various periods of formation and urban development and continuation, which is the DNA genetic code recording urban development. Therefore, in consideration of the extension of urban context and texture, the design adopts a small courtyard form.

2.2. Streamline organization

On the first floor, the surrounding centralized exhibition hall introduces natural light from the atrium; on the second floor, the exhibition rooms are scattered in several cabins, which are connected by the ring corridors outside the atrium, and the courtyards with different atmosphere are formed between the exhibition halls, which are suitable for holding many small exhibition activities. This indoor and outdoor matching courtyard space refers to the spatial texture of the ancient town, so that visitors can travel between the art works and the real landscape of the ancient town, and experience the situation where the objects and the heart match. In the small courtyard on the east side of the second floor, a clear water reflects the reflection of old Ginkgo biloba and completes a borrowed landscape collection.

![Figure 2. Function room](image-url)
3. Functional body organization

3.1. Modeling treatment

The ancient ginkgo tree at the entrance is one of the oldest ancient trees in Shanghai. It has witnessed the changes of the city for hundreds of years and is a public gathering place for people to "date" and "meet", so the processing of the entrance is low-key and natural. In the space organization, the indoor atrium in the center of the building is the core of the moving line. On the first floor, the surrounding centralized exhibition hall introduces natural light from the atrium. The courtyard staircase with strong sculpture sense is the core and soul of the whole building. On the second floor, the exhibition room is scattered in several cabins, which are connected by the ring corridor outside the atrium. Between the exhibition halls, a courtyard with different atmosphere is formed to receive the surrounding scenery, providing a place for various activities. This indoor and outdoor matching courtyard space refers to the spatial texture of the ancient town, so that visitors can travel between the art works and the real landscape of the ancient town, and experience the situation where the objects and the heart match. In the small courtyard on the east side of the second floor, a clear water reflects the reflection of old Ginkgo biloba and completes a borrowed landscape collection.

Figure 3. Facade composition

3.2. Form element details

Zhujiajiao Museum of Humanities and art, the architect is Zhu Xiaofeng with beautiful scenery, meaningful artistic conception, exquisite connection with ancient town scale, and high degree of completion. Architecture not only redefines the relationship between people and ancient trees, but also reshapes the way of people to people communication in space. Instead of bringing us directly into the art museum, the architect moves forward from the side path. The architectural form has a certain visual perspective on the street. This indoor and outdoor matching courtyard space refers to the spatial texture of the ancient town, so that visitors can travel between the art works and the real landscape of the ancient town, and experience the situation where the objects and the heart match.

Figure 4. Profile analysis
3.3. Architectural experience
In the experience route designed by architects, we are often pulled into or away from ancient trees or ancient towns to feel the dialogue relationship between this new form and the context of ancient towns. It can be seen that architects carefully embed the form of letter into the ancient urban texture under the premise of quasi central historical environment.

![Figure 5. Street View of Art Center](image)

4. Summary
The Binhu Area where Zhujiajiao jiujiantang Xiyuan is located has attracted a large number of high-end people and brand developers to settle down, and has become the planning focus of Qingpu's "one city, two wings" policy. With the nearby Hongqiao transportation hub, Dianshanhu Avenue, rail line 17 (under planning) reaching the city center, the regional value space is huge. Zhujiajiao jiujiantangxiyuan district supporting facilities: a number of golf clubs, yacht clubs, many star hotels and international schools around. And there are Yuechun Hotel (under construction), Tan Dun water music hall, shangduli leisure square, national granary, four people's hall, Hu Xiangcheng art exhibition hall, performance theater, humanities and Art Museum and other art and leisure venues.

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