Research of the INHERITANCE and Development of Traditional Architectural Culture in Modern Architectural Design

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Abstract. The paper analyzed conception, layout, building design of the DiWu hotel of DaQing city institute of exploration and development, and discussed in the modern architectural design, how to dig through and refine the traditional architectural culture, combined with the local climate and the requirements of the times, to achieve the organic combination of traditional and modern culture.

Introduction

With the development of international, more and more urban and architectural convergence are enhanced. As an integral part of Chinese architecture, Traditional architecture culture tend to be ignored in modern city construction. How to make traditional elements into the design of modern architecture organically, make better collision and sparks, are the challenges faced by architects. This paper, taking building design for the DIWU hotel of Daqing institute of exploration and development as example, to discuss how to dig and refine the traditional architectural culture in the modern architectural design, Combining with the characteristics of local climate and time request, make out traditional and modern collision sparks.

Item Survey

Daqing, is located in north latitude 45 degrees of temperate grassland, advantaged conditions spawned a unique character and style, enjoy the “green oil, lake city, the hometown of hot spring, migratory birds paradise” reputation[1]. This project is located at the west side of Zhongyi main street, Ranghulu district, Daqing. Construction land including the original old building land of the Diwu hotel and northern yard of motorcade of Daqing institute of exploration and development. The total land is about 37870 square meters. All the buildings of foundation are three-storey buildings at most and the topography is very open. The surrounding buildings are no less than seven layers.

Conception

Chinese traditional architecture has a long history, coming down in One Continuous Line. no matter how modern society changes with each passing day as well as architectural thoughts and styles, traditional architecture can always give people the sense of belonging. To create the building both has the cultural connotation and contemporary feel is the mission of every architect. The evocative architectural space and the most iconic symbols of the traditional Chinese architecture bring out the design ideas and inspiration of this project.

The Use of Traditional Architecture Space

The courtyard is the soul of layout of Chinese ancient architectural group[2]. From local-style dwelling houses to the palace complex, all closely related to the courtyard. Courtyard embodies the Chinese traditional architectural space for introverts, the courtyard is stressed by the Chinese concept that a geomantic omen precious place, courtyard to express the character of Chinese people.
introverted subtle nature reservation orientation, the pursuit of courtyard is a small world which belongs to oneself and not be disturbed. Courtyard, as it were, emphasis on privacy and territoriality, eager to provide their own party niche, and emphasis on participatory, also to provide sufficient communication for neighbors. In the architectural complex, courtyard plays the role of a link, which can put the single building together as an organic whole.

**Traditional Architectural Symbols**

Chinese traditional architectural symbols come from intuitive part of ancient Chinese architecture, such as slope roof, cornices, horse head walls architecture, stone finches, prism, etc for architecture artifacts, painting, smallpox caisson, grilles and other building decoration. How these symbols integrate into modern aesthetic idea, is both the inspiration behind this design and the point to explore positively.

**General Plan of Land**

**Planning and Design**

Through the overall consideration of the institute campus, the whole land is divided into four regions. administration official area—reception area—accommodation area—logistics area, four areas are not only interconnected but also individual. This design is concerned essentially with reception area and accommodation area. Reception area is divided into three parts conference reception part, dining entertainment part and sports fitness part. Accommodation area is composed of a complex building and eight hotel villa. Logistics area include a logistics complex building and a two-story garage.

**Traffic Organization**

The whole west and south side of the foundation close to municipal roads. So the accommodation area is located at northeast corner of the foundation, be protected from the noise and dust of external municipal road, as to create a quiet, comfortable and intimate environment. Reception area and accommodation area are connected together by corridor, that are both advantageous for the construction by stages and can make the accommodation area and the dining area to connect internally, and can be protected from the weather such as wind and rain. Logistics area is convenient for all the areas. The interior streamline of reception area emphasizes the identification of each functional area, to change numerous to brief. Accommodation area focuses on the ornamental lines of landscape, emphasizes the pursuit of a winding path leads to a hidden sport of Jiangnan landscaped gardens.

**Architectural Design**

**Main Building Layout—Emphasis on the Role of the Courtyard**

The subject construction is divided into two phases, the first phase of construction is accommodation area, the second phase of construction is reception area.

Accommodation area is composed of a complex building and eight hotel villa. Complex building includes catering, entertainment and hospitality services. The hotel villa has its own separate entrance and parking space, both can get to external road by direct access, and can get to complex building and reception area through internal corridor. Accommodation area is composed of a complex building and eight hotel villa, in the middle to form a large landscape chambers, be separated by internal gallery and flower, green fence, to form a private courtyard that belongs to each villa, to provide an exclusive domain for each villa. To break the boring and single pattern of external space of the villa.

Reception area is consist of conference reception part, dining entertainment part, sports fitness part and affiliated office area. through four areas to surround close, form two internal courtyard. one of them is the atrium with glass canopy, the other form a semi enclosed open courtyard by the conference reception part and sports fitness part, the introduction of the courtyard space not only make the
architectural space rich at the same time, but also get nature penetration, make indoor and outdoor space organically fuses in together.

**Single Building Design—Emphasis on the Refinement of Symbols**

In single building design, this project is proposed to highlight the local-style dwelling houses of Chinese style courtyard, wall, door, shape. Using the symbols of Chinese traditional architecture, such as the horsehead walls in Anhui, the Siheyuan of Beijing, “Four water to hall” courtyard in Jiangnan—By closely scrutiny, recombination structure, the search of contrast and generality of space, looking for a kind of resonance in the collision, so to form a new kind of architectural environment which can break out the restriction of time and space.

**Design of Building Plane.** On the basis of meeting the functional requirements, the design of building plane pay more attention to the organic division of the construction of various functional areas, building function not only need to be separated, but also closely link. in addition, by the design of yard and atrium in the design of building plane, specially emphasis on the mutual penetration of indoor and outdoor space, striving to make the design to achieve “green building” concept.

**Design of Building Elevation.** Building facade adopts modern Chinese design style, not only paying attention to the inheritance of traditional Chinese architecture, but also emphasizing on the pursuit of simplicity of modern architecture. In the utilization of facade material, this design highlights the elements of both traditional and modern. The coexistence of stone, wood, and cement, glass, steel and other modern building materials, realize the traditional reconstruction. On the color of building facade, rendering “plain”, emphasize on the pursuit of simple and compact appearance for the elegant and simple effect. Black—aluminum alloy coping, aluminum alloy doors and windows and other aluminum alloy components; white—white metope is to be given priority in traditional Chinese architecture. this case is located in the northeast, in order to achieve the effect of the “warm” and durable resistance, the main wall use dry-hang beige material. Grey-feet, the wall retreated to the back, etc, in use of the local color, helps to break depressing feeling from black and white, grey, and can increase the effect of “warm”.

**The Landscape Design**

**Water-designing**

There are many lakes in Daqing. Water has a certain spiritual and active, and is one of the four elements of traditional Chinese gardens. In this case, the use of water and yard design come into one integrated mass. In accordance with the principle of Chinese classical gardens of water, in order to increase the space effect of the garden, you can take the way of “together”. Therefore, in the accommodation area, to form a large surface, at the same time, in order to break the monotony, designed to irregular surface contour, a more liberal infiltrated into the surrounding space, with roads and bridges interspersed and the center pavilion, makes the surface appear to be more grandeur and has more administrative levels. Conference reception area take the way by breaking up whole into parts, combining with the building blocks and functions, a small scattered waterscape , echoing the accommodation area waterscape mutually.

**Artistic Conception**

The flower window is a kind of architectural component which has the function of use and decoration. In addition to its own beautiful appearance, it also can play the role of non-isolation, increasing the level of space, forming an internal and external organic space. Bamboo, lofty integrity and humility has always been respected by men of letters, can be used into the house, park, painting, poetry, is gentle and elegant[3]. therefore, bamboo popular in Chinese classical garden. In this design, to simplify the traditional flower heart part of the beautiful window design, adapting to the modern aesthetic habit, and combining the window flowers with trees, the flowers do dancing outside the
window, under sunlight, flower windows, shadows, white wall like a painting, forming an intriguing refinement.

**Ecological Design**

The relationship between man and nature in ancient China, particularly emphasize on the spirit of “harmony between man and nature”. The Chinese traditional residence advocates the nature, and pays attention to the inherent law of the harmony and unity of the heaven, the earth, the human and the harmony, which is a profound traditional ecological energy-saving concept. In January 1, 2013, the Ministry of housing issued the green building action plan to accelerate the development of green building[4]. Green building design should first consider the passive design, at the beginning of the overall planning, we need consider the local natural conditions, local conditions for the construction of the spatial layout, the combination of groups. In single building design, we should consider to make full use of kinds of natural resources, such as natural lighting and ventilation. For some adverse climatic conditions, we can take the detail structure treatment, such as the wall thermal insulation, the combination of architectural modeling design some shade measures and so on.

**Construction Combined with the Nature**

According to the climate characteristics of Daqing city, the design of building space and construction process, fully considering the use of natural ventilation, lighting and stereo virescence, intends to create a kind of natural diffusion space interface, to reflect the whole idea of “green building” and “low energy consumption building”.

**Virescence System.** This plan to explore the practice of the “green building”, using three-dimensional greening system to create a green living environment for all the guests and internal staff. It consist of square green, courtyard green, atrium green and future roof green considering to form a stereoscopic greening system.

**Ventilation Design.** There are many green wisdom in Chinese ancient architecture, especially the natural ventilation design concept in traditional dwellings[5]. In traditional Chinese architecture, courtyard, partition of doors and windows play a certain role in ventilation. The design makes full use of the concept of green ecology to design a microclimate environment, in front of the square, the back garden and the courtyard to plant a large area of plants, and introducing water to regulate temperature and humidity. In addition, the local part of the building can be used to form a better ventilation and air convection, in order to achieve the purpose of improving the environment.

**Sustainable Architecture—"the Conception of Green Building"**

Environment crisis and the huge cost of operation pose challenges to the design, but also provide a new train of thought, in addition to the proposed concept of “green building”, we also introduce the concept of sustainability in the design of the building.

**Energy Conservation.** Taking the form of architecture which is more suitable for the climate and making use of “renewable natural resources”, including air cooling system that is set by natural ventilation principle, and using the active and passive solar energy equipment. For example, on the design of the building the increasingly mature technology of the solar water heater is unified considered.

**Water Conservation.** In the scheme, the technology of “solar biological treatment” is used to make the processing of sewage and take second use as low level again, including outdoor garden watering and indoor toilets, the use of the water system not only reduce the water consumption, but also create conditions for extracting ingredients from life(e. g, organic fertilizer) and using again. In the entire hotel building, to be adopted water-saving toilets and low water consumption equipment, establishing a complete system of water. In addition, the waste water of swimming pool can be directly discharged into the landscape pool outside and so on.
Materials Saving. The durability of materials is another concern in the process of architectural design and application. It is very important to reduce the maintenance and replacement of the material to prolong the life of the building. For example, the crowd hall and corridors are set to use wear-resisting stone as the ground paving materials, the main wall of the building using dry-hang stone and so on.

We believe that the “environmentally friendly” materials should have the following properties: it can be produced in situ or renewable resources, can be obtained locally, the production process has little effect on the environment, recycling, durability, low energy consumption, low carbon dioxide (CO2) discharge. It will not harm the human body, and contribute to building energy conservation and minimizing maintenance requirements, and may be preferred material with little impact on the environment, one of which is the local materials, whose energy consumption performance is saving transportation energy consumption.

Summary

The design of Diwu hotel of Daqing is an attempt of the collision of traditional architecture and modern architecture. From the layout of building groups to single building design and construction of ecological design, they draw inspiration from traditional Chinese architecture and combine traditional architecture space, traditional architectural symbols, the traditional elements, the traditional ecology landscape style with modern materials, technology, which is not the copying of the traditional elements, but the inheritance and innovation, to create out the modern hotel construction both has modern architectural styles and traditional styles that is consist of accommodation area, training area and meeting area. Reasonably referencing the wisdom of Chinese traditional architecture and the modern building, which is an opportunity and challenges for modern architects; Eclecticism, coordinated development is the future development direction of architectural design.

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