

Discussion on the Application of Copper Carving Art in Cultural Industry Zone

Taking Chu River and Han Street in Wuhan as an Example

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Abstract—In recent years, as the urbanization process continues to accelerate, the construction of famous historical and cultural cities, towns and villages with traditional characteristic in China is in full swing, and pseudo-classic buildings and street village are increasingly popular. The art of bronze carving has become an indispensable costume, which can effectively enhance the cultural connotation of the featured villages and towns and promote the confidence of the Chinese culture. During this period, the art of bronze carving also developed rapidly and was widely used, injecting the crystallization of modern technology into innovation. This paper briefly introduces the artistic value of bronze carving art, points out the application value of bronze carving art in cultural industry area, and analyzes its practical application in combination with specific cases, which has certain guidance and reference function.

Keywords—*bronze sculpture art; cultural industry zone; cultural element*

I. INTRODUCTION

As an information carrier, the development of bronze sculpture will be influenced by the development of culture and technology. The change of bronze sculpture symbolizes the inheritance and innovation of historical context, which is closely related to cultural transmission and artistic expression, as well as people's visual perception. Against the background of the industrial era, great changes have taken place in bronze carving. Cases of bronze carving, casting bronze carving and forging bronze carving applied in cultural industrial areas are becoming more and more common. The development of bronze sculpture art not only accelerates the development of sculpture art, but also is a beautiful landscape of cultural industry area. Based on this, it is necessary to strengthen the research on the application of bronze sculpture art in cultural industry area [1].

II. OVERVIEW OF THE COPPER CARVING PROCESS

In order to realize the effective application of bronze sculpture art in cultural industrial area, it's needed to first understand its basic classification and connotation, which is the theoretical basis.

A. Overview of Casting Bronze Carving

Different from forging bronze carving, casting bronze carving is the art of bronze carving successfully polished and cast with professional molds and techniques. In the design of the cast bronze carving, the first is the preliminary design manuscript for the bronze carving, and then to draw software design model through the computer, finally to cast the cast bronze carving according to the model drawing. The original design method is the earliest mud draft, when the mud draft and the design scheme basically consistent, then the mold turn. The melted wax is poured into the clay mould to form the intermediate wax, thus forming the initial wax mould. Then the paraffin wax is wrapped with fine quartz sand, and the wax is melted with high temperature after forming. Then the melted copper water is poured into the finished quartz sand shell, and the separated bronze sculpture is melted into a whole through welding. Finally, it's the turn to weld joints, coloring and sealing wax. [2]

B. Overview of Forging Bronze Carving

Forging copper is designed on a sheet of copper, which is softened by heating and then hardened by repeated hammering. After many hammering process and cooling, it transforms into forging reliefs. In the process of forging copper, the control of the heat, and the use of hammer and chipper are essential. Forging copper requires high temperature heating, and then repeated hammer to make it smooth. Then use the hammer and the chipper to carve according to the original design. Therefore, hammer and chipper are two indispensable tools for the whole forging copper process. The forging copper process is basically done by hand, with individuality and high appreciation. Unlike cast copper, the surface of forging copper is uniform, with different golden color forming different texture. Because of repeated hammering, forging copper carving is light and easy to install.

III. THE APPLICATION VALUE OF BRONZE CARVING ART IN CULTURAL INDUSTRY AREA

The copper carving art in the cultural industry area has various application values, which are reflected in the following aspects.

A. Technological Beauty

The art of copper carving originated from Shangzhou. Its material is copper, which is made by carving, casting and forging. With the integration of modern science and technology, the art of copper carving can fully show the technological beauty. In the production of copper carving, there is a unique innovation. The birth of acid-free etching technology has greatly reduced the pollution of the copper carving process and the maturity of copper sulfide multi-level oxidation process makes its appearance full of metal colors. The picture is vivid and full, and the sense of three-dimensional and art is extremely strong, giving people a strong shock in science, technology, culture and art. On the other hand, the art of copper carving has the advantages of modern science and technology, and has been injected with modern science and technology such as computers and photographic plates. The chemical reaction between the compound and the bronze surface is catalyzed by heating to naturally form a variety of colors, thus forming diversified coloring of colorful copper carving art [3]. The development of technology not only enables a large number of industrial mass production of bronze carving art into cultural industrial areas, but also brings huge opportunities for the development of bronze carving art [4].

B. Formal Beauty

Traditional bronze sculpture artistic design is basically derived from realistic sculpture form, and its aesthetic value is difficult to be fully explored. Against the background of the new era, great changes have taken place in people's requirements on sculpture. As a part of cultural value in cultural industry zone, sculpture is no longer solidified art, but the art of space. The art form of bronze sculpture has developed from the realistic sculpture form to the abstract sculpture form. Then, with the development of culture and art, the realistic sculpture form has become abstract, forming two unique charms that are integrated and inseparable. The two are connected with each other, making people fully feel the unique charm of bronze sculpture art [5].

C. Functional Beauty

As a common form of sculpture, bronze sculpture belongs to an artistic media carrier, which also has the function of transmitting information. The introduction of bronze sculpture art into the design of cultural industrial park

has changed the original information transmission mode and communication media. At the same time, the characteristics of diversified, artistic and popular information transmission have become more obvious, enriching the display function of cultural information in the cultural industrial park. At the same time, the art of bronze sculpture also plays a role in carrying the history and culture of the city. The cultural value of the cultural industrial park can be enriched and revitalized by integrating urban culture into bronze carving art, applying new art forms and endowing it with the connotation of the times [6].

IV. THE APPLICATION OF BRONZE CARVING ART IN CHU RIVER AND HAN STREET IN WUHAN

In order to give full play to the application value of bronze sculpture art in cultural industrial area, this study analyzes the excellent case of Chu River and Han Street in Wuhan, and the specific analysis process is summarized as follows. On September 30, 2011, after the opening of Chu River and Han Street in Wuhan, the author studied the architectural sketches and decorative materials there, and the bronze sculpture became the focus of attention. The art of bronze sculpture in Chu River and Han Street is mainly reflected in the ground copper relief.

A. Ground Copper Relief in Qu Yuan Square

Dragon boat racing (See "Fig. 1") is the first copper relief people entering Chu River and Han Street will encounter, and the square is Qu Yuan Square. The bronze sculpture vividly depicts people racing dragon boats on the Dragon Boat Festival. Wu Jun, a man of Liang in the Southern Dynasty, wrote in a book titled Xu Qi Xie Ji: "Qu Yuan, the Chu official, was exiled because of slanders of the treacherous ministers. He threw himself into the Miluo River on the fifth day of the fifth lunar month. The Chu people were very sad and tried to save him. Dragon boat racing on the Dragon Boat Festival has always been a custom." After Ming Dynasty, dragon boat racing became more popular and the scene was very grand, which shows that this folk custom is to commemorate Qu Yuan, who threw himself into the river. The "boat" in the picture is also seen in King Mu Biography (a book written during the Warring States period) and Hymn on East King by Qu Yuan, in which the sport is called "dragon boat racing". Of course, due to the customs of different regions, the rules and forms of dragon boat racing are also different, but there are always helmsman, drummer and a large number of oarsmen. The relief shows the intense scene of dragon boat race, which not only enriches the material beauty of the pavement in the pedestrian street, but also integrates the allusions of Qu Yuan, the poet of Chu of Jing Chu Culture in Wuhan, so that tourists can understand Jingchu culture in their journey.



Fig. 1. Dragon boat drawing in bronze relief.

B. Ground Copper Relief in Zhiyin (Bosom Friend) Square

The word "zhiyin"(bosom friend) comes from Yu Boya and Zhong Ziqi. In the design of relief in Zhiyin (bosom friend) Square, allusion that Boya broke his beloved musical instrument in memory of his old friend, Ziqi, is taken as the creation image, combined with the advantages of Jing Chu Culture, so as to retain the existing historical culture of Jing Chu and present bronze sculpture as the carrier of art and culture. Whenever Yu Boya expressed his heart with the musical instrument, Zhong Ziqi can understand his ideas from the rhyme. Yu Boya quitted playing and destroyed the musical instrument because of the death of Zhong Ziqi. According to Yue Ji of Book of Rites, it's impossible to talk about music with people who only understand sound but not music, to talk about music theory with people who only know music but not music theory, but few people know music theory. According to Tang Wen of The Works of Lie Zi, Boya is good at playing musical instrument and Zhong Ziqi is good at listening. It also shows the unique cultural allusions of Jing Chu. There are two ground copper reliefs in Zhiyin Square, namely Qin relief and Drum relief (See "Fig. 2" and "Fig. 3"). Boya is good at playing musical instrument and Zhong Ziqi is good at listening, so the Qin relief and Drum relief have become the symbol of Zhiyin Square.



Fig. 2. Qin relief.



Fig. 3. Drum relief.

C. Ground Copper Relief in Yaosheng Square

Yaosheng Square is designed to commemorate Li Shizhen, a prominent pharmacist in the Ming Dynasty. There is not only a statue of Li Shizhen on the square, but also a ground copper relief (See "Fig. 4"). The contents of the bronze carving are calabash, ramming pot, smelting furnace and medicine roller, all of which are pharmaceutical tools. Li Shizhen was a person from the Jiajing period of Ming dynasty (1518-1593). Calabash is not only used as medicine, but also as daily utensils to hold medicine as it can prevent moisture from entering. As pharmaceutical tools, ramming pot and medicine roller are also indispensable tools for Li Shizhen, the medical scientist. As is known to all, in the middle and late Ming dynasty, in his later years, emperor Shizong became more obsessed with Taoist magic, and was crazy for longevity and alchemy. As a result of alchemy, Li Shizhen was driven out of the Xuanmiao Temple. His clinic also closed, and superstition alchemy also became an important part of Li Shizhen's life.



Fig. 4. Ground relief in Yaosheng Square.

D. Ground Relief in Taiji Square

The relief in Taiji Square (See "Fig. 5") is taken from the scenery of Wudang Mountain in north Hubei Province. There are two reliefs, one of which adopts the layout of two

magnificent mountains surrounding water. The other relief depicts the carp playing in the water [7]. Wudang Mountain is the birthplace of Taoism and Wudang martial arts, as well as an important tourist area and cultural attraction of Hubei Province, thus the name Taiji Square.



Fig. 5. Relief in Taiji Square.

V. THE INNOVATIVE STRATEGY OF BRONZE CARVING ART

A. *Selecting the Iconic Cultural Industrial Zone to Create Fine Bronze Carving Art*

The inheritance and development of the copper carving art promote the construction of Chinese national culture. It reflects the pursuit of traditional culture spirit in modern society and is also an important form of expression of traditional culture. The cultural industrial area selects representative ancient towns and streets, designs a batch of iconic bronze carving art according to local cultural characteristics, promotes the tourism development of folk towns, gives full play to the important role of bronze carving in ancient towns and promotes the overall development of local cultural construction with fine bronze carving art.

B. *Reflecting Regional Characteristics from the Innovative Aspects of Copper Sculpture*

The choice of the theme of bronze sculpture should not only follow the traditional form of expression, but also form the aesthetic interest and psychological activities of modern society, and form the contemporary social value and artistic aesthetic. By means of exaggeration and abstraction, which are common in art, elements are extracted from local culture and bronze sculpture is introduced into the design of pseudo-classic building, so as to carry the historical culture of the city. While the historical attribute of pseudo-classic building remains unchanged, it is endowed with new era connotation.

C. *Modern Science and Technology Are Applied in the Art Form of Bronze Carving to Create a Variety of Bronze Carving Art Forms*

With the development of modern science and technology, the continuous updating of materials promotes the continuous change of the art form of bronze carving. Copper carving material selection, manufacturing means also make the bronze carving show a different style. As an art form displayed indoors and outdoors, bronze sculpture needs to be adapted to the environment according to different locations. On the one hand, it is necessary to strengthen the development of copper carving materials in harsh weather such as outdoor strong light and acid rain. On the other hand, it is necessary to strengthen the establishment and perfection of the daily protection mechanism of bronze carving, and reduce the corrosion of natural factors such as sulfur dioxide, carbon dioxide and other chemical elements on bronze carving and the influence of tourism development on bronze carving.

VI. CONCLUSION

Nowadays, China is vigorously developing traditional culture. The art of bronze sculpture, with its unique form, plays an important role in study of the development of ancient art, and is also an important inspiration for modern art design. It is a very precious material and cultural property left by the ancients. With China's pseudo-classic buildings, street villages and towns are becoming more and more

popular, the role of the art of bronze carving shines. Many ancient towns and streets combine local culture to form a strong national culture, fully embodying the cultural achievements of the ancient bronze art [7]. Of course, in the process of using bronze sculpture art, there are still some problems and cruxes that require concerted efforts from artists and urban citizens to make bronze carving art more systematic in the cultural industry. This not only meets the requirements of the beauty of urban construction, but also promotes the confidence of Chinese culture, making it one of the important Oriental elements of the Chinese nation and even the world.

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