



Red Civilization-Terracotta·Red Brick

Dazhi Liu*, Yupeng Wang

Xiamen Institute of Arts and Crafts, Fuzhou University, Fuzhou, China

Email: 707347443@qq.com

Abstract: Pottery is an important symbol of the Neolithic age, and it has become the first civilization product formed by using natural materials through various chemical changes. In the early stage of human beings, most of the pottery products were made of red color. At the beginning, most of them were made of symmetrical vessels, coffins and terracotta figures, which were also made into red tiles for building components. “Red ceramic brick” in Arts and crafts, sculpture, architecture and other aspects, through thousands of years of development and transformation, with its unique charm, still becomes one of the main materials of modern art and architecture, presenting numerous classic works. At the same time, it has opened up an infinitely wide new field for mankind to make full use of natural resources, and has also promoted the development of economy, culture, spirit, art and architecture.

Keywords: red pottery, red brick, building components, regional aesthetics

1. Introduction

Even though the human civilization originated from different places, but in the process of any regional civilization development, a same product of civilization “pottery” must be created. Since soil is the most common material that can be easily obtained and used, thus using soil to fire utensils became a general choice of early humans. Its emergence changes the property and performance of natural materials under various chemical reactions, then making soil and water become pottery with the action of fire, which also marks the end of a million years of work with stone tools, so the appearance of “pottery” can be considered as the first technological change in the history of human civilization.

2. The form and characteristics of terra-cotta

Terracotta is one of the most primitive ways in making pottery, at the very beginning, it was used to make utensils, pottery coffins and sculptures. Not only because of its density, water absorption, hardness and other unique physical characteristics, but also due to its low price, easy to burn, and low damage rate, terracotta is widely used, but more in daily utilities and building materials. Actually, “pottery” and “brick” is of the same origin, with the passage of time for hundreds of years, the texture and tactility generated from this red material as well as the artworks and buildings created by terracotta and red brick have made countless classic works around the world, but it is still emitting unparalleled light.

The main difference between terracotta art and other pottery lies in that its development process is more embodied in the shaping of body and the expression of color. Terracotta pays more attention to rich modeling and changes in texture, which aims to show the simplicity of inherent color, it mainly takes sculpture as the main expression form as compared with other types of pottery. The difference of regional civilization gives it different national spirit and decorative characteristics.

3. Origin and regional characteristics of terra-cotta red brick

3.1 China

Terracotta is commonly referred to as red pottery in China, and its names are various in accordance with different place of origin, minerals, density and usage. As early as primitive society, people began to knead soil into a variety of simple characters and animal shapes and fired them together with pottery. During the Shang and Zhou dynasties, this workmanship was developed, mainly in the shape of tripod, pot, retort, cauldron and many other utensils. During Spring and Autumn Period, with the decline of sacrificial persons system, a variety of lifelike pottery figurines with real image appeared and were adopted to replace person for funerary, most pottery burial figurines are soldiers and horses, slaves, gigaku and animals. As a category of sculpture art from the Eastern Zhou Dynasty, the pottery burial figurines recorded the

thread of art development and the track of the changes in aesthetic appreciation learning during the past dynasties, which became an indispensable material for understanding the history of ancient Chinese sculpture art.

3.2 Africa

In Africa, the completely exaggerated terracotta head figures represents the Nok Culture at West Africa, which are mainly single images just as the traditional African wood carving.^[1] Moreover, it do not pay attention to realism, but trying to show a natural instinct of nature, with strong expressiveness as well as rich and bold artistic expression techniques. Some small terracotta head figures are more unique in carving techniques and ways, since their local proportion of stretching and squeezing are gradually contracted from top to bottom, thus making the turning point of front and back space generate more soft sense in beauty. At the front face, the trigonometric composition is more stable and balanced. This is exactly the main feature of Nok carving style.

3.3 Americas

^[2] In Americas, the terracotta created by Indian people is more unique, before the Europeans invaded Americas, pottery was the sacred object of Indians, the black pottery took dominant place in the early days. Whether it is rich in the shape of utensils, or strange and unpredictable patterns, both of them can be compared with some pottery technology that belonged to some advanced nations in ancient Eurasian. Whether it is Peru's erotic pottery, Macapá's tube-shaped pottery, which mimics human sitting for placing remains, or unique structured pottery, cups, bagpipes, and other practical tools painted with animals, birds, figures, cups, all of them shows the aesthetic taste and national character of regional culture, which are full of simple and kind wishes as well as innocent and cheerful life vitality, but also with strong mysticism color and religious flavor, they tend to pursue rich and changeable artistic effect.

3.4 Europe

The Sumerians who lived in the Land between the Two Rivers had made books by using mud slabs, in which recorded some myths and discovered The Epic of Gilgamesh of Ancient Babylon. What's more, the terracotta drum of various shapes in Ancient Babylon is one of the origins in the appearance and formation of drum instruments. During Mycenaean Civilization of Ancient Greece in Europe and the successive Aegean Civilization, the shapes and techniques adopted in terracotta coffin, mold, glaze preparation, body shaping, decorative painting and mosaic can fully demonstrate people's strong ability to perceive and capture nature, at the same time, they also express the pursuit of idealized modeling and decorative effects, which echo the best artistic characteristics in late Greek art. However, in Ancient Rome, the mud with high iron content was used as glaze, and the surface of pottery was decorated with embossed decoration and flower-embedded decoration. Furthermore, the Etruscans made the art of terracotta to the extreme. They created colorful painted pottery plates and vivid statues, which were influenced by Asia Minor in the East and Greece, in addition, it also expressed the distinctive characteristics of Etruscan and presented various visual expressions in artistic techniques. These crafts convey people's different lifestyle, local customs, spiritual beliefs and cultural accumulation in different regions, they also breeds diversified regional aesthetics.

4. The expression of art and architecture

4.1 Shape transformation

In Renaissance Period, accompanied by the advocate of ideological culture and revival of artistic aesthetic education, terracotta developed from Italy again and then affected almost all regions of Europe, most of Italian Mallorca pottery and French idyllic pottery adopted the characteristic of red, the decorative form of painting gradually changed to relief and sculpture, the performance also changed from pattern to realism.^[3] The terracotta architecture and decorative components in Renaissance Period are more popular, since architects took full account of the characteristics of Gothic building, such as the spires, pinnacles, niches of decorative structure and the bright color on the wall, especially in Lombardia, all the buildings adopted terracotta as materials. Until now, the roofs and walls of many remaining classical architectures in Europe still keep the impression of terracotta and red brick. Clay is different from other hard materials like stone or wood, because its shape can be changed freely, it has a strong plasticity and is easy to repair after damage, so clay was also burned by sculptors at that time to create small samples. Terracotta sculpture began to prevail in Europe in the late Renaissance, many sculptors adopted the form of direct firing and created many exquisite terracotta sculpture works, such as French sculptor Jean Antoin Houdon (1741-1828), Auguste Rodin (1840-1917) and so on.

4.2 Architecture and culture

Many areas in Asia also had developed quite an affection for terracotta and red brick, the Indus Valley and Ganges River basins have given birth to dazzling Indian culture, as influenced by a variety of religious cultures, its

architectural style is totally distinct, the sandstone, pottery brick and glass block in crimson were used in many temples and mausoleums. After the split between Bangladesh and India, its architectural style was influenced by season and resources, so previous Muslim mosaic building was taken as the main body, then forming the native style with terracotta as decoration. The brick masonry structure of Angkor Wat in Cambodia vividly shows the essence of Khmer Civilization, more than 4 million pagoda architectures and terracotta statues in Bagan, Myanmar. Furthermore, many other countries like Thailand, Vietnam, Laos, etc. have also been affected by Indian culture, most of the terracotta and red brick form the architectural characteristic with a sharp arrow-like spire, at the same time, these buildings have integrated into Chinese style.

4.3 China's terra-cotta red brick building

We can not verify whether the architectural style of terracotta was originated from Ancient Babylon or Ancient Greece.^[4] By referring to obtained materials, in the early Shang Dynasty, terracotta water pipe had already appeared in China, pan tile and imbrex firstly appeared in early Western Zhou Dynasty, in the Spring and Autumn Period, brick, tile, pipe and other building components that made of terracotta had also appeared. The Great Qin Dynasty belongs to water according to the Chinese five elements. In the Yin and Yang Five Elements Theory, cyan belongs to water; red belongs to fire; water represents the most noble virtue in Chinese people's mind; black is also a favoured color. Thus, people at that time had used many blue bricks decorated with animals, plants and moire patterns as building materials.^[5] Most production processes of cyan and crimson are the same, the only difference lies in that cyan is watered by workers for 5-7 days for slow cooling after the kiln discharge, but crimson is cooled by wind. This unique process of making blue brick increases hardness and intensity, so it's stronger in freezing resistance, water resistance and corrosion resistance, and color is properly arranged. Therefore, the Terracotta Army created in Qin Dynasty also used this method for colored drawing after firing. Han tiles that were decorated with animals are the most excellent, in addition to the Green Dragon, White Tiger, Suzaku, basalt four spirits, rabbit, deer, cattle, horse also have wide varieties. Since the steady and solemn expressed by blue brick and grey tile are also in line with the ancient^[6] Chinese Confucianism, so they are widely used slowly in China from the north to the south. However, in the South Fujian Region that located in south-eastern coastal area of China, red brick and red tile have been used as one of the building materials for hundreds of years to form a very special style, that is, the "red brick house" architectural system, "red brick and white stone" style is different from the most residents' houses in China, which is the reason for the uniqueness. This style is a symbol of traditional folk houses in South Fujian and it has become a major branch of traditional Chinese architecture.^[7] The "red brick house" in South Fujian originated from different accounts, all the tomb bricks with inscription at third year of Yongjia (A.D. 309) and the fifth year of Taikang of Western Jin Dynasty (A.D. 284) unearthed in Quanzhou are red bricks with inscriptions and clear dates. At present, more than 100 of tombs in two Jin Dynasties, Southern Dynasties, Sui and Tang Dynasties have been found in Quanzhou, large number of rectangular and wedge-shaped red tomb bricks had been unearthed. In addition to the unique buildings, terracotta pots of Shang and Zhou period are also unearthed in Zhangzhou, terracotta coffins of the Southern Song Dynasty are unearthed in Nan'an, as well as terracotta figure "Wind Lion God", which was spread to the Japanese Okinawa area in Ming Dynasty for putting at the door, roof or high place of villages are still can be seen everywhere in rural areas of Zhangzhou, Longyan and other places in Fujian until now. But this kind of culture and architecture must be created locally and influenced by foreign culture to a certain extent, in the course of history, the culture has been precipitated and accumulated constantly.

5. Conclusion

Terracotta red brick with its own simple, rough, mysterious, simple and modern charm has been popularized and widely applied until now, it's more a starting point for changing natural substances into another one in the action of burning through labor and wisdom of human. Making a general observation on production and development of terracotta red brick throughout the world, it can be found that there is close connection with natural life. Whether by chance or by certainty, it is really an indispensable driving force for the great inventions and creations that continue to speed up the progress of human civilization.

Nowadays, the innovation of manufacturing technology has enabled the ancient materials of terracotta to take on new vitality. Hollow terracotta brick is the perfect material for making exterior walls and light sunshade. Because of its custom-made shape and various types of glaze colors, more modern architects make full use of its strong texture, durability, ventilation and heat dissipation effects in architectural form and decorative design, they integrate rich constitutive relationship and light levels together, so that creating a stunning sense of history and fashion, forming beautiful and natural, vivid and simple landscapes. Terracotta red brick carries the accumulation of human history and culture. Contemporary

ceramic artists and sculptors also make use of its characteristics of simplicity, plain, rough, easy to shape, splice, carve and decorate to create a variety of different art works.

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