

# Research on Luoyang tri-coloured glazed pottery process

LIU Yuling

*South China University of Technology, Guangzhou, 510000, China*

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**Abstract:** Tri-colored art is the treasure of Chinese history and culture, and it is the masterpiece of Chinese ceramics. Luoyang Tri-colored art fully embodies the potential and advantages of Chinese ceramic culture, which is thousands of generations of Chinese ceramic culture, experience, technology, aesthetic crystallization. This paper starts from studying the Luoyang Tri-colored porcelain process, and exploring the application of decorative patterns in tri-colored through the practice of decorative art design. Luoyang Tri-colored art is showing a unique charm of the art form through the integration of modern technology and the characteristics of modern art design creation. Based on the characteristics of Luoyang Tri-colored art, it is demonstrated to be a kind of Manifestation adapting to modern art life, and can create a high grade, high artistic value of Tri-colored art.

## 1. Introduction

The most famous tricolor-glazed pottery starts from Han Dynasty, but the lead is contained in that pottery, so that the wide range of which is lower than "Tang Tri-colored" [1]. The most common form of traditional tang tri-colored include tri-colored horse, tri-colored camel and other shapes, as well as a small amount of life appliances modeling [2]. Cultural relics and traditional crafts are generally found in the initial discovery of the place, and tri-colored arts are unearthed most in Luoyang. As a result, in China Arts and Crafts Report - National Industrial Art Industry Survey Report, Tang Tri-colored was named Luoyang tri-colored in 2008. Tri-colored arts are based on a few basic traditional triplanous glaze, and Luoyang tri-colored arts are developed from the ancient "tri-colored" to stable red, blue, yellow and other hundreds of rich colors, which is a watercolor type of art.

There has been such a saying "Tri-colored red is priceless", and now tri-colored is not only red. There are a variety of red, pink, orange, crimson, light red, all kinds of red Renjun election. Tri-colored arts through the creator of imagination and the implementation of different techniques, showing a different style. There is no so-called immutable rule in the field of art, and trio has a new breakthrough in the artist's research, giving the creator more space to create personalized works of art.

Luoyang tri-colored application is different from the pas color of the painting, it can be a variety of wonderful combination together, giving the viewer a strong visual impact. Tri-colored arts can be red and unrestrained, green and tender, and there will not be other art complementary colors together to reduce each other's style. Tri-colored glaze painting is a beautiful high-profile and beautiful eternal, which has unique charm into the artist's heart. As a result, the unique Luoyang tri-colored arts allow creator to express their own emotions and feelings of life, to stimulate self-potential creative enthusiasm.

## 2. Tri-colored process: taking square plate as an example

### 2.1 Drawing line draft

The production of tri-colored needs to draw line firstly, and drawing a small line is used to clear the design direction in earlier stage. However, the final drawing needs to keep same-size ratio with entity, because the line is usually copied to the biscuit directly with copy paper. After determining the final draft of the drawing line, the line can be shrunken printed out for small color proof drawing, which is to lay the foundation for the glaze. The small color proof drawing is difficult to control because of strong liquidity of tri-colored glaze, so it is necessary to strictly control it in earlier stage.

## 2.2 Draft Copying on Clay Body

Before the draft line to the biscuit, the frosted paper is used to polish it to be even and smooth, because the smooth biscuit can enhance the clay adsorption. Based on the polish process, the conversion of paper line to biscuit line is conducted. There are two forms of conversion: the one is a small amount of production, and the other is that the line is only copied to copy paper, and then copied to the biscuit with copy paper; the other is large quantities of production, and the bundling line needs to complete on the copy paper, then it will be copied to the biscuit through a similar screen printing way. Based on copy paper, the pattern presented on the biscuit is the line; with the bundling line, the pattern with ink brush painting presented on the biscuit is the dotted line.

## 2.3 Wetting biscuit

After the copying the line to the biscuit, the next step is wetting biscuit, of which requirements are pretty high: overmuch water would make the line cannot stand up, and insufficient water would make the line break easily. There is not a fixed amount of the water consumed by wetting biscuit, and it depends entirely on the operator's experience. On the condition of too much water on the biscuit, the naturally dried or artificially dried way can be chosen; Instead, the way of adding water can be chosen.

## 2.4 Drawing vertical line

During the process of drawing the draft, the author practice drawing vertical line on the biscuit. In terms of the vertical line drawing, it is easier to draw more symmetrical line with beauty and strength on smoothly polished biscuit. During the vertical line drawing practice, the author understand the line characteristics of tri-colored art, and the author refine lines in the follow-up draft, only to remain those essential lines (as shown in Figure 1).



Fig.1 Drawing vertical line on biscuit

Line is the most important part of the whole picture, and the vertical line drawing has top priority in burning the tri-colored glaze. For the beginners touching the tri-colored glaze painting firstly, the best way to grasp the tri-colored glaze painting is to coloring the vertical line. The vertical line can enrich the stereo feeling and line beauty of the picture, besides, the scope of the glaze can be limited.

In addition to the requirements of vertical line drawing, but also need to Sheng Tao mud gourd in the clay water to control. How to master the dry and wet of the clay in the gourd is a particularly important thing. If the gourd in the clay is dry, need to first exhaust and then absorb water, muddy mud is wet need to remove the needle gourd mouth, and then learn more dry clay. Moderate humidity of the clay, stand out of the line with a sense of beauty and practical value. Want to do the whole picture of the line seamless convergence, clay mud humidity is particularly important. If the clay is too dry, the convergence of lines and lines prone to gap; the other hand, into a group, like a glaze opened, can not form a vertical effect.

In the course of the line to grasp the level of the line and the thickness is very important, the line is too easy to split line, the line is too low not blocking glaze, the line is too easy to break, the line is too rough, affecting the beauty of the screen. The style of the biscuit will have an impact on the vertical line, with four corners of the square plate, for example, standing in the middle of the square line to be uniform, four corners of the line needs to be slightly thicker and slightly higher, because the square four corners Alice of the higher, easy flow glaze.

## 2.5 Glazing

Glazing needs to be cautious, no matter what the color of the glaze to the biscuit are red, the only difference is the degree of red is not the same, there are red and red with orange red, all kinds of red on the biscuit. Because the glaze is red, according to a small color of a color is not easy to confuse a color. If the wrong color, in the finished product out before the more difficult to find, but after the finished product is difficult to change. Glaze thickness of the need to control, too thin easy to bottom out, too thick easy to cause flow glaze, resulting in the entire screen dirty. Glazing can be reconciled, superimposed, in the basic glaze in the modulation of the required glaze, different glaze superposition to increase the richness of color.

On the end of the disk glaze, need to be painted around the same color. Disk than the plane of the biscuit trouble, you need to brush the bottom of the brush at the end of the need to pin the disk wireless place, carefully do not touch the surrounding glaze, slowly flip gently down to the turntable. Check the bottom of the disk is clean, if there is no need to clean the need to use the scraper above the extra things clean, and then gently wipe clean with rubber. Brush at the end of the first brush at the end of the clay mix, evenly coated at the bottom, in the brush around the time to be particularly careful not to let the bottom of the glaze flow to the disk or disk. Brush if the end is too thick, easy to produce bubbles at the bottom, too thin is easy to reveal the end.

In addition to glazing can be used on the gourd, you can also use the brush on. With gourd glaze more heavy, resulting in burning the color to the deeper, gourd glaze easy to flow outside the line range. With a brush glaze, although the brush glaze speed is very slow, but the very thin, it is easy to burn a very transparent feeling. Brush can draw the glaze very little, draw a small part, you need to re-glaze bowl stained glaze. Glaze bowl with glaze has a knack, first glaze bowl glaze stir, because the glaze itself is easy to precipitate the mud. Stir well with a brush from the bottom picked up, so you can ensure that the brush can be washed enough to glaze, to avoid futile to the plate all the water is not glaze. Brush glaze when the need to be careful, do not want to draw the line, the best one-time make it better to modify the work to be more complex than to re-create a lot.

## 2.6 Firing and follow-up treatment



Fig.2 Retouching

Kiln process is very worth looking forward to, glaze from the ordinary soil into a colorful eye-catching ceramics. Into the kiln is best to put two days, so that the overall comparison of dry, burn out the effect is better. Burning need eight or nine hours, after burning can not be immediately taken out, need a night of cooling. After burning out if the

glaze will be part of the flow glaze knocked out, knock on the need for technology, use the machine slowly grinding, do not put the bottom of the biscuit grinding. Grinding time to easily wear off the surrounding lines, worn off the line after the basic can not make up. Exposed part of the need for relatively thick glaze, it can be a good cover in the burning of the brick surface. Re-on the glaze must be careful (as shown in Figure 2 glaze), must not touch, glaze in the smooth porcelain surface is easy to knock off. Fill the glaze after the firing method, or the same as before.

### 3. Tri-colored application: taking flower decorative patterns as an example

The classical verses about flowers such as “A riot of colour is always spring”, “Adorning thousands of pear trees with white blossoms”, and “Peach blossom a cluster open without the Lord” are widely read, which let people love flowers further. Flower is a very fantastic, beautiful, and romantic memory for many girls, and it is also the essential elements of fairy tale world. The flowers inside the girl’s fairy tale world are always colorful, of which color splicing is full of imagination. The uniqueness of the tri-colored art is that it can intertwined beautiful colors together, which cannot be matched with each other in other pictures.

Flower is a classic art theme, enduring, well received by consumers. Floral patterns will be applied to the tri-colored, can make floral patterns show better results. Tri-colored can not only express the common floral patterns, but also show people imagine the fantasy floral pattern. First with the line to plan the whole bones, after the glaze as the soul of the whole picture points. Figure.3 presents the classical tri-colored artworks: Fig.3 (a) presents the artwork of lollipop, and Fig.3(b) displays the picture of "flower rhyme, which depicts the real flowers, and it seems realistic but not really.



(a) Lollipop



(b) Flower rhyme

Fig.3 Tri-colored artworks

The design of Figure.3 (b) flower rhyme is to take flower as the main body, and the middle of design are leaves. The shape of the flower seems to be the same as the ordinary flower, in the semicircle of the petals used in the form of vertical coloring, so that the color of the petals more regular. In the heart of the contrast color and complementary color of the superposition, so that the middle of the more colorful and moving. Between the heart in addition to colorful, which increase the local heap, point, sweep and other techniques to make a variety of glaze superimposed on each other, so that the content is more refined heart, the whole picture more engaging. In the process of burning the glaze flow each other, so that the whole work can not be copied to the solitary goods. The flower of the whole flower is very strong compared with the petals, very eye-catching. Flowers and petals are very colorful colors, between them with low-key connection color, so that they are harmonious integration.

The author of the flower color selection of three candy color to fill, built on their own familiar candy color so that people are more willing to accept the colorful flower decoration. Figure 4 flower rhyme in the design of the clever use of the square plate itself four corners of the characteristics of the four corners with the leaves and flowers in the middle echo each other. Color, surrounded by leaf color is relatively simple, more highlights the colorful flowers in the middle. Square plate around the leaves of the depth of change, increase the level of the leaves, but also shows the mobility of glaze.

### 5. Conclusion

Luoyang Tri-colored art is China's precious non-material cultural heritage and a treasure of Chinese culture, which is filled with the ancestors’ effort and wisdom. The College students learning Luoyang tri-colored art should inherit the basis of excellent traditional culture and dare to innovate with the ideological edge to break the old routine, which can

bring out continuous innovation. In addition, striving to promote the returning of the intangible cultural heritage in modern life, to show the world the beauty of contemporary China is also worthwhile.

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