

A Research on Tie-dyeing technique and It's Application to Puppet Products

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Abstract: The uniqueness of tie-dyeing technique lies in dealing with the fabric by the methods of sewing, binding, wrapping, knotting and sandwiching, etc, through “tying” and “dyeing” to produce the visual effects of color dyeing, the rich changeable color gradient and the folding printing and dyeing on the fabric. This ancient and special charming handicraft, with its unique effect of color and pattern printing and dyeing, changes the past use of the fabric and is synthetically applied on puppet products, which gives birth to the puppet products full of Chinese style.

Introduction

As a traditional folk handicraft art, because of its unique artistic charm, various tying and knotting methods, and simple and elegant patterns, tie-dyeing shines distinctively like a bright pearl among all the present fashion elements . Many world famous brands also applied it into the design of their own products. The tightness of the bunching tying, the folding ways of the textile and the density of the needle pitch, etc , could all have an influence on the patterns’ final effect directly. Therefore, before tying and dyeing, the designers should have a clear design concept including the choice of the fabric, the patterns’ modeling, the representation technique of tying and sewing, and the chosen dyeing technique, etc.

The “tying” and “sewing” technique representation and effect analyses of tie-dyeing

Coming from tying and dyeing, the pattern presents a successive type, regular, definite and clear. If the designer uses something hard but bigger to sandwich and tie the fabric, there will be richer color transition. The shape and specification of the thing used for sandwiching and tying, and the folding methods of the fabric, the different degree and parts of sandwiching and tying would make its results various, and make the fabric feel intricate and have bright lines.

The “sandwiching” and “tying” technique representation and effect analysis

The “sandwich-tying” method is a tie-knotting method which sandwiches the fabric between two boards to resist dyeing. As for this technique, what the designers should take care is the type of the boards and the folding method of the fabric. The boards can be made according to the need and can also be decorated with skeleton design. The folding methods of the fabric are usually screen form and fan-shaped form, and its representation can be rectangular, triangular and parallelogram, etc.



Chart 1 The “sandwich-tying” method

Making methods: first, fold the fabric in the expected way, and choose the suitable boards matching the pattern, and then choose the proper part of the folded fabric to sandwich and tie.

Effect: get the regular changing patterns with bright lines, or the regular changing patterns. The lines' thickness and the change of the patterns, etc are related to the folding methods of the fabric, the shape and position of the boards. (Right chart: the finished effect of triangle folding method)

The “sewing” and “twisting” technique representation and effect analysis

The “sew-twisting” method is the most basic and the most widely used tie-knotting method. It can achieve the results that other methods cannot, for its flexible and changeable representation methods which are suitable for a variety of forms and its capability of finishing varied patterns. The basic sewing methods consist of flat seaming and round seaming. Flat seaming also called bunch seaming or arch seaming, is the most commonly used “sew-twisting” method and includes: single-layer seaming, double-layer seaming, multilayer seaming. Round seaming is also named roll needle seaming or wrapping edge seaming.

Making methods: first fold the fabric to its half and draw the needed pattern on the fabric with a pencil, and then stick and pull out the needle along the line made by folding on the fabric from the same direction, and make the string bypass the folding line and finally roll up the folding line. Pay attention to the needle pitch, and follow the order of from the small to the big and from the inside to the outside.

Effect: the pattern is drawn with countless dots around which the color and dye solution form a gradient, and the pattern effect is obvious. And the wider of the needle pitch is when the designer sews, the greater the strength is when the designer tightens the knot, the better the dye-resisting effect will be. The needle pitch when the designer sews and the strength when the designer tightens the knot and so on could all influence the effect of tie-dyeing.



Chart 2: the finished effect of four-layer fold-sewing



chart 3: Sew-twisting works

The “binding” and “tying” technique representation and effect analysis

The bind-tying is the most commonly used and the most basic making method whose making steps are: first take a small part of the fabric according to the advanced composition idea, the shape of this part looks like a closed umbrella, and then use yarn and string to bind and tie. On the umbrella-shaped fabric, there are plenty of spooling ways and methods, which also affect the works effect after tie-dyeing. The spooling ways are parallel spooling, interval spooling, cross spooling, spiral spooling, equidistant spooling, free spooling, etc. The related following patterns have many forms like the single circular, double concentric circular, multiple concentric circular, isometric concentric circular, non isometric concentric circular, free concentric circular, swirl marks, reticulate pattern, cobweb pattern, etc.

Effect analysis: the designers will get the circular pattern whose margin presents a slight color gradient because of the permeation of the dye solution. The length of the umbrella-shape and the place of the spooling decide the size of the circular pattern; the longer the umbrella-shape is and the farther the distance between the place of the spooling and the apex, the bigger the circular pattern will be,

otherwise, the circular pattern will be much smaller. The degree of the spooling string's thickness and the string's cylinder number decide the width of the circular pattern. Meanwhile, the texture, thickness and the ways of spooling and its degree of tightness would all affect the circular pattern's features. The more the string's cylinder number is and the more complicated the spooling way is, the more complicated the change of the finished products' lines will be, otherwise, the lines will be much simpler. The tighter the string is tied, the lighter the pattern's color will be, and the more the blank will be, otherwise, the pattern will be darker and the blank will be less. This effect shows the unique artistic charm of tie-dyeing technique which possesses the clear features of Chinese traditional patterns.



Chart 4: the finished effect of isometric concentric circle pattern



chart 5: the picture of the finished effect with the rotation method

The tie-dyeing technique's application to puppet products

The artistic forms employed on the present puppet products are various, and the application of tie-dyeing technique to silk fabric or leather which constitutes part of the materials and artistic forms of the puppet products, fully reflect Chinese people's aesthetic taste and textile technology. The application is very innovative and creative.

The innovation of tie-dyeing technique on fabric

With the constant progress of arts and crafts, in different regional culture, there appears many new types of tie-dyeing techniques which focus on the change of fabric. Besides the traditional cotton fabric, silk fabric also becomes the important fabric of tie-dyeing technique. Most of the natural silk cloth is white and the most precious is natural silk which gives tie-dyeing technique a different colorful texture for its "jade green". Commonly, the natural silk fabric includes several major categories: georgette, double georgette, crepon georgette, georgette Lanhua, Sangbo damask and warp-knitting, etc. And it also covers the silk, tussur silk, ricinus silk and cassava silk, etc.

In the tradition, tie-dyeing technique is mostly used in textile fabric and seldom in leather. Because of the continually development of technology and social need, the leather tie-dyeing art appears. The needed leather must have the uniform thickness, light color and delicate surface particles. It should be soft and its grain side should be less broken. The leather materials, well-developed and suitably springy, should be easy to bind, tie, and dye. Tie-dyeing leather breaks the situation that

leather products focus on single color, have no change of colors and patterns and are relatively dull, and put on a new look for leather. Tie-dyeing leather not only has the leather's texture and stiffness, but also possesses the charm of tie-dyeing, which brings new extension to tie-dyeing fabric.

The preliminary exploration of tie-dyeing technique on puppet products

The success of puppet products lies in its beauty in form, beauty in image, among which the beauty in form is the soul of puppet products. In the combination process of between the design of puppet products and tie-dyeing technique, their respective advantages should be fully taken. People use China's traditional craft techniques creatively to develop a new type of puppet products with China's traditional style and bringing a completely new feeling to consumers.

First of all, design the image style of the puppet and serialize the image. The serialization design is where the success of the product sales and good effect of the design lies. Using the different color gradient of the same color system of tie-dyeing as the design of a series of puppet products, the designers could make the puppet products show the effect of getting the difference from the same things for their same images, same styles and their fabric of different color gradient, which presents a sense of series well. The second design scheme: as for the same tie-dyeing cloth and color system, the designers could choose the different tie-dyeing techniques, and create different tie-dyeing patterns, then apply this cloth with different patterns and same color system to the same position of the puppet products and, meanwhile, combine the China's tradition embroidery techniques to make the distinctive puppet products with Chinese charm. The third design scheme: the designers can choose a small piece of the tie-dyeing cloth from some region of the puppet product and join it with some different materials and different texture to make the products have various artistic forms and modernity. And the fabrication of the split joint texture should pay attention to its randomness. The fourth design scheme: the designers can apply tie-dyeing fabric for decoration in some region of the puppet products, for instance, the body part or the dressing accessories part. Then it can make the products fashionable and full of national style, at the same time, it can reduce or avoid the unicity of the products' fabric, and moreover, it highlights the simple and unadorned but elegant beauty.

Conclusion

Tie-dyeing art, a simple handicraft art, whose beauty in craft work, simple and unadorned beauty, affection beauty and natural beauty, continually and constantly evolve in technique and change in fabric and patterns, gives a strong visual impact to the whole world and makes people feel more about the natural beauty of the traditional art.

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