

# The Application and Research of Morocco Pottery Pattern in Knitting Fabric Pattern

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## Abstract

The paper mainly analyzed the characteristics and types of colors and patterns of Morocco porcelain. We studied the potential correlation between Morocco pottery and knitting fabric pattern and probed the innovative way of knitted fabric pattern design. Finally, the simulation knitted renderings based on the software of kaledo knit are given and the result showed the patterns of Moroccan porcelain could be applied in the design of knitting fabric pattern.

**Keywords:** Knitted Fabric, Morocco Porcelain, Color, Patterns

## 1. Introduction

At present, the knitting clothing is entering the stage of multifunction and vogue. Knitting clothing not only has the quality with a soft material and good moisture absorption, but also has the nature of good flexibility and extensibility (Cheng Yajuan, 2005). In recent years, the proportion of knitting garments is rising among popular clothing and the fashion process of knitting clothing is also increasing. The style of knitted clothing is relatively simple and the structure line is also less because of the special structure, but the patterns on knitwear are much rich (Shan Yufu, 2005).

Morocco, near the Mediterranean Sea, located in the extreme north of Africa, whose handicrafts (such as ceramics, woven carpet, leather goods, etc.) are rich and elegant is called the kingdom of Africa handicrafts. Now we will take the potteries which has a great diversity of performs as subjects to research.

The paper mainly analyzed the characteristics and forms of Moroccan porcelain pattern and color and studied the potential correlation between Moroccan porcelain pattern and knitted fabrics. In addition, the simulation knitting renderings are drawn in the software of kaledo knit according to the particularity of knitted fabrics. Finally, the forms of Moroccan porcelain pattern and color are applied in the designing of knitting fabric.

## 2. Literature Review

The pattern design of knitting clothing is always one of the main contents scholars are dedicated to study. It is clearly found that many forms of pattern have applied to the design of knitted garments in recent years. For example, paper “the application of animation pattern on the knitted garments” wrote by Liu Dongyun, Zhuang Lixin and Wang Yunjie, “the application of clothing pattern on knitting clothing” wrote by Shan Yufu, “the application of pop art pattern on knitted garments” wrote by Liu Lei, “the application and research of post-impressionist painting in knitting clothing” wrote by Wu Yufei, “the influence of the geometrical pattern to knitted apparel products style” wrote by Cheng Yajuan, etc. The paper chiefly discusses how to get inspiration from Morocco porcelain patterns for the design pattern of the knitting garment and has a high reference value.

## 3. The relationship between the pattern and knitting fabric

The themes of knitting fabric pattern are wide and various, which can be described by the forms and styles of exaggerated, prominent, soft relaxed as well as bright, etc. However, the knitting fabric is constituted with yarn bended into the coil which is the smallest unit and connected to each other by the needles, and the colors of patterns nearly achieved by the yarns, that is to say the colors of knitting fabric pattern are not suitable with overmuch, generally speaking, seven or eight colors are in favor of pattern designing. Therefore, whatever kind of the pattern styles applied in the knitting fabric, they must be targeted to the certain pattern instead of designing as random and freedom as woven fabric. Usually, the patterns are expressed on the knitting fabric with the form of bulk area, dotted

or full flowers, which have free decorative patterns. In general, the designing of silhouette structure and the selection of materials on the knitting clothing design to the wearer are inclined to convenient, comfortable as well as casual, yet pattern adornments are mainly to meet people's requirements of keeping a relaxed mindset and stretching the personal feelings in a state of leisure.

#### 4. The Analysis and Application of the Color of Moroccan Porcelain Pattern on the Knitting Fabric

##### 4.1 The Color Analysis of Morocco Porcelain Pattern

One of the loudest languages and most infectious factors in the visual communication is the fabric color, it not only could convey information and express feelings, but also is an important factor of beauty (Shen Lei & Tang Ying, 2007). The colors of Morocco porcelain with the feature of rich, collocating clever, are not only showing the local characteristics strongly, but also bringing a unique visual effect. No pottery is more famous than the pottery from Feith blue, safi yellow, Sahara real green and mike green decorative pattern in Morocco. In a manner of speaking, the most representative and classic colors in Morocco porcelain are blue, yellow, and green. We could find that the color performance mainly has the following characteristics by studying carefully.

##### 4.1.1 The Application of Neighboring Color

The pattern in figure 1 uses the classic color of Morocco porcelain, sky blue, dark blue, green, gold, as well as white. The blue and green are adjacent on the color wheel, belong to the type of weak contrast and middle purity colors. It will reach a comfortable effect that the whole picture is not too dark or too bright if they are applied compositely. The sky blue and the dark blue belong to the same color scheme which gives people a feeling of very soft (Song Xiaoxia, 2008). The three colors matched in knitted fabric together show a picture with the features of gentle and quiet, elegant as well as harmonious, but at the same time it seems monotonous and fuzzy. Under the circumstances, the achromatic color of white and the chromatic color of golden increase the feeling of lively and bright, which will make the whole picture has the strength and will not lose the feeling of reconcile.



Figure 1. The application of morocco porcelain adjacent color



Figure 2. The application of adjacent color in knitted fabric

The color of figure 2 can be classified cool color basically. Figure 2 was drawn in the software of kaledo knit without changing its original combination relations of color and pattern (hereinafter the renderings are drawn in the software of kaledo knit). The main characteristics of the pattern are soft and refreshing. So the pattern can be knitted to single-sided jacquard fabric with the thin yarn by the computer flat knitting machine and used to do thin knit coat, dress, or bottoming shirt of spring and summer.

#### 4.1.2 The Application of Contrast Color

As shown in figure 3 of the porcelain pattern, the porcelain have rich and bright colors if we look it from the top to the bottom, but it only contains five or six colors. Blue brings people the feeling of cool and refreshing, all bright or light colors are suitable to go with it. The strong contrast color effect could be produced between the yellow and blue which easily leads to a visual fatigue. So the peacock blue which is the adjacent color of the dark blue will be used to reduce the visual impacting (Yao Xiaolin, 2007).When the adjacent color blue and dark blue or the weak contrasting color blue and yellow are too fusion or contrasting, the white which belongs to the achromatic color will have a interval, which could get the destination of making the fuzzy color clear and making the excessive stimulation color soft. This is why Morocco porcelain has few colors, but always has a good visual effect to people.



Figure 3. The application of morocco porcelain contrast color



Figure 4. The application of contrast color in knitted fabric

The figure 4 is the simulation knit rendering based on figure 3 that is the source of the inspiration. The pattern of figure 4 could be knitted for knitwear in a computerized flat knitting machine which is an essential equipment of



knitting field. Because of the rich and bright color, it is very suitable for spring and autumn coat fabric and looks warm and sunny in a cold environment.

#### 4.2 The Application of Morocco Porcelain Patterns in the Knitted Fabric

##### 4.2.1 The Classification of Morocco Porcelain Pattern

The species of Morocco porcelain can be described with multitudinous, but we found it mainly has the following two types after searching and summing up the data.

###### (1) The flower-shaped pattern

One of the most huge types of Morocco porcelain pattern is flower pattern which have a abundant manifestation, such as the forms of separated, the kind of combined with insects, geometric shape. Flower-shaped pattern compared with the geometric shape of the pattern in colors and lines are more rich and complex. (Jian Xiaohui & Wang Zhi, 2014). The vines are most widely used among the massive flowers pattern designs and the cobalt blue and other colors are always popular. The vines pattern of Morocco porcelain is shown in figure 5.

###### (2) The geometric shape pattern

Besides the flower pattern, the geometric shape pattern is another common type of the Morocco porcelain. There are not only three-dimensional geometries, but also have planar geometries. (Huang Yican, 2010) One of the most popular typical patterns is the full symmetric pattern of 360 degrees composed with simple geometric graphics which superpose and interweave mutually and form a highly symmetric cone, as shown in figure 6. It brings a special visual effect that can be described with dazzling, unlimited extension and complicated.



Figure 5. The vines pattern of morocco porcelain



Figure 6. The geometric pattern of morocco porcelain

##### 4.2.2 The Innovative Applications of Morocco Porcelain Patterns on the Knitting Fabric

Continuous symmetric patterns account for a large proportion in Morocco porcelain patterns. The paper clearly summarizes the applications of continuous symmetrical patterns on the knitting fabric.

###### (1) The jacquard fabric

Jacquard which use different color yarn weave a variety of patterns through the yarn interwoven, a braided line usually composed of two or more colors woven from beginning to the end. The color pieces of single-sided jacquard fabric should not be too large due to float lines existed on the back (Liu Dongyun, WANG Yunjie & Zhuang Lixin, 2014).

What we done was making the colors of figure 7 simplified and drawing the simulation knitting rendering shown in figure 8. From the whole figure it can be clearly seen that the texture constituted by a small patch pattern, which not only can realize double jacquard, but also can achieve a single jacquard weaving. Although single-sided jacquard fabric has low strength and extensibility and takes the poor performance, but it's thin and low cost.

Application form the pattern in the knitted fabric, point element with the characteristics of centralized, eye-catching is mainly used in the pattern Figure 8.



Figure 7. The Application of Morocco Porcelain Pattern in Jacquard



Figure 8. The Application of Jacquard in Knitted Fabric

## (2) The applique fabric

The big patches pattern are often weaved by the way of applique due to the double jacquard fabric is thicker and needs more raw materials. The principle of Intarsia knitting is each of the colored yarn guide mat yarn only in their own color area, the yarn guide is left until the next column head return and continue to weave after lapping inside the area, another guide on the edge of the same row will continue to weave this line. Most applique fabric belongs to the single side fabric (Liu Lei, 2014).

The pattern as shown in figure 10 belongs to the type of larger patch and single pattern, which will be generally implemented by the organization of applique on the knitting fabric. According to the application form, it easily be found that the point element, small surface element are used widely.



Figure 9. The application of morocco porcelain pattern in intarsia



Figure 10. The application of intarsia in knitted fabric

## 5. Conclusion

Knitted fabric is a comprehensive art endowed with the quality of both practicability and artistry, so many art forms can be a source of inspiration of knitted fabric pattern design (Yu Fangfang, 2012). Knitted fabric, like other carriers, is also a medium to convey creative thinking and the key is how to use the technique to create a moving visual effect. The paper based on Moroccan porcelain pattern analyzed its features, summarized the characteristics of color and how the color matched skillfully, and analyzed the relationship between color and knitting fabric. Finally we drawn

the renderings which can clearly reflect how the Moroccan porcelain patterns expressed on the knitting fabric in the software of kaledo knit. It not only spreads culture, but also offers a new idea for knitting fabric pattern designs by researching the Moroccan porcelain patterns on the knitting sweater fabric pattern design.

#### 6. Limit and future research directions

This article which simply introduces the fabric patterns extended from Morocco porcelains is a bit shallow. It will be more persuasive if the specific fabric physical figure can be woven. The application of Moroccan porcelain pattern on the knitting clothing provides a new thought and method for the pattern design of knitting clothing, but it is only under study at present. A complete set of clothing can be seen in the market in the near future and the clothing will really play the role of spreading culture and helping people pursue personality. At the same time, we should realize the source of knitting clothing pattern design can be obtained from every field and breaking the routine is a good method for finding new things.

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