

Analysis of the Application of Bamboo Weaving Technology in Furniture Design

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Abstract: Bamboo weaving is one of the traditional handicrafts in China. It has a history of thousands of years, represents the civilization of a country and a nation, and is the crystallization of the hard work and wisdom of the working people. With the continuous development and change of The Times, the bamboo weaving technology and products are also constantly developing and changing. This paper will study the bamboo weaving craft and the bamboo weaving furniture.

Keywords: Bamboo weaving technology; Furniture design

1. Overview of bamboo weaving process

“In China, bamboo weaving is a molding technique with bamboo. It is a traditional weaving technique and also one of the traditional modeling techniques with various categories.”^[1] And has the precipitation of historical and cultural connotations, and exquisite technical techniques. In the long history, bamboo weaving products are the basic living utensils that people need from beginning to end. Traditional bamboo weaving technology is produced by the continuous needs and practices of the working people in life. It generally has various kinds of living utensils and works of art, with artistic culture and practical functions, reflecting the combination of bamboo culture and human wisdom.

The earliest bamboo weaving is human to avoid the attack of wild animals, using the characteristics of bamboo thin skin, but good toughness, bamboo weaving “wall”, their rest place with bamboo woven around. Early bamboo products had bamboo baskets, mainly used to store food; bamboo ware for fishing, bamboo mats for sitting, lying, etc. The middle stage of bamboo weaving pattern patterns gradually emerged. In the later stage, bamboo weaving technology was further developed and has been widely used in people’s production and life. Due to the large demand for bamboo weaving products, their types and colors have also increased, including square, round, corner, waist shape, and other modeling forms. The woven bamboo thread is closely arranged and can weave many patterns.

With the development and change of society and economy, bamboo weaving skills also continue to inherit and develop, but the whole shows a declining trend, only some bamboo weaving daily necessities still exist in people’s life.

2. The characteristics of the bamboo weaving technology

2.1 Process flow

The process of the bamboo weaving process is fine and complex, which requires carefulness and patience, and each process needs to invest a lot of energy. The process of bamboo weaving probably has the following processes: picking bamboo - preparing material - weaving - locking.

Step 1: Pick the bamboo. The knife used to cut bamboo is shaped like a curved hook. Bamboo picking is very exquisite, and the type of bamboo should be selected according to the woven objects. Small, tender bamboo is used to weave fine bamboo ware, and thick, old bamboo is used to weave large bamboo ware. Step 2: Prepare the materials. First, handle the selected bamboo with a knife, and soak, steam, bake, and smoke to enhance the softness and toughness of the bamboo slices, and finally, stain it. The dyeing method is mostly to boil the bamboo slices in the colored boiling water. Step 3: Knitting. Weaving the processed bamboo slices. The process of weaving can be rough: bottom, waist, shaping, and turning. Step 4: Lock the edge. With fine soft bamboo wire, insert, bundle, pull, tie, and lock the edge, make the edge of the bamboo more stable. This process can make the bamboo firm and compact, complete and delicate, beautiful and generous.

2.2 Craft techniques

Bamboo weaving techniques are diverse, with different cultural customs in different regions, and different craftsmen have different weaving techniques, forming a variety of patterns.” According to the different materials, are divided into” bamboo silk refined “and” bamboo thick woven.”^[2] According to the difference of weaving techniques, it can be divided into “dense knitting” and “thin knitting”. The bamboo weaving techniques vary according to the needs, and all the weaving techniques are developed and extended from the most basic cross-weaving techniques. The common main weaving methods are human font weaving, cross weaving, twill weaving, hexagon hole weaving, and chrysanthemum bottom weaving. In addition to the techniques introduced above, bamboo weaving also adds dyeing and lacquer decoration technology, highlighting the aesthetic function of bamboo weaving, which can be anti-proof, and moisture-proof, moth-proof, but also reflects people’s unique aesthetic taste and life skills to adapt to the environment.

3. Bamboo woven furniture design elements

3.1 Functional elements

3.1.1 Structure

Bamboo weaving, usually shown in the furniture structure in the form of a “body”, uses bamboo tenon connection, binding, wrapping, inlay, wrapping, cross, and other techniques, the structure is relatively simple. The leg structure of stool furniture connects two bamboo ends. In the parts of the furniture structure, tie it up and wrap it with bamboo strips to make it more firm.

3.1.2 Form

“The basic form elements of furniture design include point, line, face, and body.”^[3]The different properties of the material determine whether its morphological elements are the same.” Points” generally do not change the form of bamboo weaving as a separate form. The form of the “line” has a certain length in the furniture design, with a strong tension, but the plane volume is small. Many of the thread weaves with “line” form, woven by bamboo contempt, have a sense of extension and direction, giving people a light spiritual experience.” Face” has a certain plane volume sense in furniture design, according to the change of weaving pattern will be more specific quantity sense. According to different weaving techniques, bamboo contempt forms a plane and curved surface.” Body is formed by the aggregation of morphological elements such as points, lines, and surfaces.”^[4] In the bamboo weaving process, the composition of the body can be facade weaving, and the “face” enclosure of plane weaving can also form the body. Generally speaking, the plane in bamboo weaving furniture, and facade combine to form a “body”.

3.2 Aesthetic elements

3.2.1 Decorating

Bamboo, as a very environmentally friendly decorative material, itself has a decorative role, furniture external decoration is less, and the decoration part is also both structure and function. Different types of products have different weaving patterns, which are the overall decorative characteristics of bamboo weaving furniture in daily life. The common bamboo weaving decorative patterns are:

Through the empty surface, the bamboo is processed into narrow, thin bamboo strips, and bamboo pieces, through the arrangement and combination of vertical and horizontal oblique fork, forming many carved regular figures. There are representations of planes and surfaces. Full pavement shape, the bamboo is processed into filament, bamboo pieces, through the horizontal and vertical arrangement or oblique fork staggered combination, presenting a regular figure of relief effect. Line type, the bamboo is cut into bamboo strips, or with fine bamboo, using the characteristics of bamboo flexibility, bending, and circuitous to form a variety of patterns. These bamboo weaving patterns are combined with the furniture function and modeling, and have different functional effects in different parts, to achieve the unity of function and aesthetic appreciation.

3.2.2 Color

The primary color of bamboo is mainly used, such as yellow and cyan systems, the purpose is to reduce costs, and at the same time to

bring people a fresh and natural aesthetic feeling. In modern furniture design to enhance aesthetic sex, a few part uses colors similar to bamboo for dyeing, red and black are the most common, and black is usually the ornament of a small area.

3.2.3 Emotion

In bamboo woven furniture, bamboo culture makes bamboo weaving have unique natural attributes, cultural connotations, and artistic characteristics. As well as the visual aesthetic elements composed of bamboo color and weaving patterns, the bamboo furniture can satisfy people's emotional experience and at the same time, make people experience the power of bamboo culture.

4. Application of bamboo weaving technology in furniture design

The design of bamboo woven furniture comes from life, and serves for life again. Most of the bamboo woven furniture is not decorated and processed, but originates from nature. The simple life philosophy contained in it is worth our development and inheritance.

4.1 People-oriented, function-oriented

Bamboo woven furniture should first meet the purpose of human use, folk handicraft person is the main group of bamboo woven furniture weaving, they are not only the creators of utensils, but also its users. Handicrafts should not only design product functions through life, but also weave them through handmade skills according to the designed scheme, which is the crystallization of human skills and wisdom, and also in line with the idea of people-oriented bamboo woven furniture. The appearance of most bamboo weaving furniture rarely imitates the natural form, and it is mostly based on simple geometric shapes based on practical functions. The design of a lot of modeling stems from the function, of making furniture more human nature. The craftsmen integrate their observation, perception, and experience of life into the bamboo woven furniture. so that they have the modeling consciousness with function as the core.

4.2 Decoration of nature and harmony

According to the needs of people, the furniture is simple. The craftsmen show the natural characteristics of bamboo in the utensils without complicated decoration, reflecting the pure, simple, and natural aesthetic concepts of the traditional people. Some adornment elements are practical, match with modelling photograph, reflecting the adornment style that gives natural harmony.

“In the decoration, the bamboo is very decorative. The composition form and weaving mode of bamboo weaving are often applied to furniture design with decorative elements, which are divided into surface decoration and decorative components “. [5] The most common form of bamboo weaving is plane, which is usually used on the surface of tables and stools. In addition to the advantages of material, there are also advantages of weaving technology and pattern, which enhance the effect of vision and touch. Bamboo material is tough, and soft, and can weave exquisite decorative components. While satisfying furniture to use stable sex, enhanced adornment effect again. If the local pattern when furniture weaves, the armrest of the chair.

4.3 Fusion of material and materials

In modern furniture design, the unique natural characteristics of bamboo weaving technology are integrated into the living environment of modern people, and the green and low-carbon characteristics of bamboo are integrated into modern design. The integration of materials and the environment integrates the bamboo culture with our lives. The better integration and application of bamboo weaving technology in modern furniture design also reflects the low-carbon lifestyle, provides rich creativity for the design of modern furniture, but also improves the quality of people's lives, and promotes people's lives towards the direction of environmental protection and healthy development.

5. Conclusion

Today's society is green, and the concept of environmental protection, the concept of green design has become the mainstream, bamboo weaving technology is in line with the characteristics of its green environmental protection, which provides an opportunity for its continuation. In addition, the bamboo culture has endowed the bamboo weaving process with deeper cultural value. The bamboo weaving process, is full of profound cultural feelings and also represents many thoughts and consciousnesses of the society, changing people's practice and aesthetics. Modern people's aesthetic concepts have gradually developed in many ways, people's appreciation ability has gradually become

higher, and technology has also improved a lot, which makes bamboo weaving, a traditional and strange craft, gradually stepping into a diversified space. In the process of real development, it has different characteristics in different histories and cultures. I believe that the bamboo weaving technology will not stop the pace of development, and will have more artistic vitality.

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