

# Exploring the Application of Design Elements that Combine Mixed Components with Ceramic Tea Sets

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Received: 11 January 2024; Accepted: 14 June 2024; Published: 1 September 2024

## ABSTRACT

*The purpose of this study is to explore the research on the application of design elements by combining multiple materials with ceramic tea sets. This research emphasizes the design elements of combining multiple materials with ceramic tea sets mainly in the analysis and study of material types, process technology, and consumers' aesthetic demands. This project adopts a qualitative research method because it is suitable for studying the innovative elements in contemporary ceramic tea set design, and discovering the visual and technological innovation of integrating comprehensive materials into ceramic tea sets; specifically, this research analyses the application of the design elements of shape, colour, and material in combining multiple materials with ceramic tea sets, and examines the styling principles of ceramic tea set design, the forms of expression, and their influencing factors in this analysis. Research. In general, this study will summarise some useful design principles and development trends for modern ceramic tea set design. It will provide a methodology and theoretical reference for the design of practical ceramic tea ware and hopefully promote the development of ceramic tea ware design. It will be beneficial to designers, researchers, scholars, students, and those interested in research.*

**Keywords:** ceramic tea set, comprehensive materials, design elements, aesthetic value.



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## 1 INTRODUCTION

The ceramic tea set is an essential household item in people's lives, owned and used by almost everyone. Ceramic material has its unique charm, its non-corrosive so that the tea set itself will not be oxidized and damaged. With the continuous improvement of technology and the increase of public demand, the use of various materials in the design of ceramic tea sets has prompted artists to change the original single material and design approach, by combining with other material components to change the style of the tea set and the practical function. With the incorporation of diverse designs and innovative elements, people's growing material needs, and aesthetic sensibilities have driven innovation in the design of everyday ceramic tea sets. Among many materials, the combination of natural materials and ceramics brings a new experience that cannot be achieved by other industrial materials.

## 2 OVERVIEW OF THE DEVELOPMENT OF CERAMIC TEA SETS

Ceramic tea set development is long, from the late Eastern Han Dynasty, after the Wei Jin and North and South Dynasties, Tang, Song, Yuan, Ming, and Qing Dynasties, through the firing of porcelain craftsmen in the continuous improvement of the skills integration experience, so that the development of ceramic tea set slowly towards maturity. 1, from the Tang Dynasty onwards, the type of tea set is

mainly copper and ceramic tea set, because by the Tang and Song Dynasty in the whole society, the beginning of the importance of the trend of domestic copper and porcelain, and not emphasize gold and jade (Wang Yunju, 2021), of which the Yuezhou kiln is the most prominent, the Yuezhou kiln is characterized by a thin bone, uniform glaze, glaze green and green glaze, Lu Yu's "The Book of Tea", the evaluation of porcelain as a tea utensil in various places at that time, is "Yuezhou on", because it is "similar to jade", "class ice", porcelain green tea colour green. (Tian Zibing, 2010) 2, Song Dynasty: the history of Chinese tea is "tea in the Tang and Sheng in Song", the first is because of the royal family for the promotion of tea, both the common people and dignitaries joined the ranks of tea, the second is the economic prosperity of the Song Dynasty and the government for the respect of the literati, so that the literati more the pursuit of quality of life and spiritual satisfaction, drinking tea, the quality of life and spiritual satisfaction.

Secondly, the economic prosperity of the Song Dynasty and the government's respect for the literati made the literati pursue more quality of life and spiritual satisfaction, and tea drinking was the most elegant daily pastime at that time. Tea culture in the Song Dynasty was more developed than in the Tang Dynasty, so the production and modelling of tea sets were more refined, and the production of ceramic tea sets gradually increased. In addition, during this period, Ding, Ru, the official, brother, five famous kilns, as well as Yaozhou kiln, Jizhou kiln, Magnetic kiln, and other distribution throughout the country, promoted the development of ceramic tea sets. Song Dynasty ceramic tea sets, simple and solemn in shape, the pursuit of natural nourishment in colouring, the overall embodiment of the people of the Song Dynasty to focus on the taste of life, which is the result of the combination of the social background of the Song Dynasty, the aesthetics of the present day, and the aesthetics of the Song Dynasty. (Wang Yunju, 2021) 3, the Yuan Dynasty is an important period of the development of ceramic tea sets, which he inherited from the Tang and Song dynasties, the Ming and Qing dynasties. High-footed cups flourished in the Yuan Dynasty, and the biggest change in the tea set was that Jingdezhen created the famous blue and white porcelain decorated with underglaze colours inherited from the magnetic kiln and the Jizhou kiln, and the shape of the vessel was influenced by the living habits of the nomadic Mongolians, which had a very high multi-cultural value. (Wang Yunju, 2021) 4, the Ming Dynasty and the Tang and Song Dynasties tea set is different, the Ming Dynasty tea set is much simpler, especially in the number of varieties reduced a lot. Based on the Song Dynasty, the Ming Dynasty made historic progress in simplifying tea sets. The white porcelain tea sets of Jingdezhen and the purple sand tea sets of Yixing in Jiangsu Province all made great progress during the Ming Dynasty, with a whole new chapter in shapes, styles, and colours. (Wang Yunju, 2021) 5, in the Qing Dynasty, the gradual increase in the types of tea, in addition to green tea, there are black tea, oolong tea, white tea, black tea, yellow tea six tea, and the shape of these teas still belongs to the bar-shaped loose tea and tea drinking the same way as the Ming Dynasty (Li Wenjie, 2008). Pottery tea sets and porcelain tea sets further development, and the number of Jingdezhen kiln production and production is very large. Among them, the highest level of porcelain official kilns created the burning of ancient Chinese porcelain at the top: pastel, enamel, and other coloured porcelain, the development of Zisha pots in the Qing Dynasty Jiaqing, Daoguang years reached its peak, the porcelain tea set is also technically the peak, the best of which belongs to the celadon porcelain tea set, the tea set is mainly burnt in the kiln, known as the "glutinous rice tire" (Wang Rhyme Ju, 2021). 6, modern tea sets and porcelain tea sets. 6, modern tea drinking, generally popular green tea, black tea, floral tea, oolong tea, pressed tea, and a variety of tea, tea brewing and drinking in different ways, the use of a variety of vessels. 1950, after the Ming Dynasty Golden Dawn of the successful reproduction of ivory white, the emergence of Jianbai porcelain, high-white porcelain, porcelain sculpture is known as the modern Chinese porcelain world, "Three Golden Flowers!", of which Jianbai porcelain is rated as the crown of white porcelain, this white glaze tea set, suitable for brewing all kinds of tea. Coloured porcelain tea set varieties of many colours, especially blue and white porcelain tea set the most striking, there are blue and white glaze red, doucai, etc., patterned blue and white, light and elegant colours. (Li Wenjie 2008)

### **3 FUNCTIONAL AND MODELING CHARACTERISTICS OF MODERN CERAMIC TEA SETS**

In the production and manufacturing process of modern tea sets, designers first need to clarify the function of tea sets, focusing on improving the practicality and aesthetics of tea sets. With the development of modern manufacturing and the maturity of new technologies, the production of ceramic tea sets will continue to apply new ideas, constantly stimulating ceramic tea set manufacturing and design ideas of innovation, we need to design tea sets in the tea set based on the actual function of the innovative design, rather than simply the appearance of change.

China's daily use of ceramic tea mainly in Jingdezhen as the manufacturing centre, generally used in the traditional mode of hanging glaze art, such as purple sand pots as China's tea in the rookie show the peak of China's tea production process. In the manufacturing process, the tea set needs to reflect minimalism, through the curve of the soft and thick shape of the pot body, forming the best proportion of the match. The design of ceramic tea set modelling is also a key issue that people need to pay attention to in the current manufacturing process of tea reflects the fusion of high technology and various schools of thought, making ceramic tea set in function and form with greater progress, abandoning the traditional functionalism and putting forward a more practical content, the human visual and sensory better linked together. In China's current ceramic tea set design process, people found that only improving the function of the tea set, in the same technical standards and large-scale production mode, cannot effectively promote the sustainable development of the product, instead of the need to make the ceramic tea set has a more pleasing to the eye modelling, will be an effective combination of aesthetics and technology.

A few days ago, many design forms reflect compositionally, and there are many reorganizations and divisions, such as the use of straight lines in the body of the pot, the overall presentation of simplicity, and paying more attention to modernism, through modernism to express the design concept. With the neck and development of science and technology, but also make a variety of materials combined with the application of more possibilities, the application of elements is also becoming more and more diversified, designers can be more diversified to express the concept.

## **4 COMPREHENSIVE MATERIALS**

### **4.1 Interpretation of integrated materials**

The interpretation of the material is diverse, in which "Myer's new encyclopaedia" on the "material" is defined as: "from the raw materials obtained from within, for the production of semi-finished products, workpieces, parts and finished products of the initial material, such as metal, stone, leather, plastic, paper natural fibres, chemical fibres and so on. ". Design art originated in primitive society, this period of creation activities on the ground, such as wood, bamboo, cotton, wool, stone, bone, and other natural materials used directly; to the period of artisanal society, the most notable feature is the use of pottery and fire as well as the development of metal material technology, these processed materials to make a qualitative leap in people's lives, and therefore produced class division, such as the court of the creation of artifacts and the folk creation of the difference; to the In the early 19th century, mechanized mass production brought new energy and power, new materials were commonly used, and a variety of synthetic materials were produced, such as light metals, plastic stools, new materials made new products in an endless stream of forms, and the texture and texture of different materials also gave different feelings of use (Yang Shifu, 2021).

The concept of "integrated materials" was proposed in the 20th century in the West, which refers to the use of different materials in product design, to form an obvious appearance of differentiation and contrast in terms of shape, texture, light, colour, and texture, and to bring people a rich sense of experience. The application of integrated materials in interdisciplinary fields such as science and

technology and design and art has made certain achievements, and naturally, it has also received extensive attention from ceramic designers. (Yang Shifu, 2021) At present, the comprehensive materials used in ceramic design on the market are mainly metal materials, non-metallic materials, and organic polymer materials, and the commonly used materials are glass, cement, rattan hemp, gold, silver, copper, plastic, rubber, and so on.

## **4.2 The application of comprehensive materials in artwork**

The application of composite materials in art is very wide, providing artists with more creative possibilities and means of expression, in the creation of paintings and works of art, through collages, such as paper, fabric, and leather for the expression of artistic concepts, so that the expression of the picture is more visual, but also to make the picture not only two-dimensional plane space. In sculpture works, it is more commonly used to comprehensive materials to create, the artist can be combined metal, wood, plastic, fibre, and other materials, to form a new form of expression of the work; in installation artworks, the use of a variety of materials is even more commonplace, the artists have a very good understanding of the physical and chemical properties of the material, through the use of the characteristics of the material, placed in the work of art for the creation of expression to create interactive and experiential artworks, the artist will be able to use the material to express their ideas.

Through the use of material properties, artists place them in their works to create and express, creating an interactive and experiential art experience that touches and resonates with people's hearts and minds. Practice shows that the use of integrated materials improves people in the process of artistic creation of space and level, but also through the integrated materials broaden the channels of expression of artistic ideas, in the design of ceramic tea sets, also through the combination of a variety of materials, to explore a richer way of expression, and constantly improve the attempt to explore the crafts, can choose and try more and more rich materials, our design language farther, the more options for design expression. The richer the materials we can choose and try, the more far-reaching our design language is, and the more selective the design expression is while enriching the user's sensory experience.

## **5 APPLICATIONS OF INTEGRATED MATERIALS IN THE DESIGN OF CERAMIC TEA SETS**

### **5.1 The application of wood materials and ceramic tea set combination**

Most of the current combination of ceramics and wood methods are inlaid, attached, and as a combination of other parts with, etc., through the wood surface treatment technology or bending process to make it and ceramics interspersed, splicing and thus become an innovative tea set Figure 1 for the inlaid and parcelled, the use of the two combination, the main body of the teapot using a wooden handle and base inlaid, the combination of this method of combining the combination of the method compared to other combining method will be a little simpler. Design and production method is the ceramic first fired, and then according to the size of the size of the custom wood part, in function of the functionality and practicality of the anti-scald, the design of the method of the modern composition of straight lines, the overall look of the lines smooth, simple design, and the design of the teacups, the designer takes into account the temperature of the brewing water according to the user to choose to drink the tea, choose to use the temperature of the brewing water, so it can be detached according to the hot and cold Cup base of the wood kit, this design method has a flexible and versatile; Tea tray also uses wood, with teapots and tea cups with the overall design has a certain practicality and aesthetics, to give the user a variety of possibilities to choose; Figure 2 used inlaid, in the handle part of the use of wooden materials inlaid, ebony handles and light cyan pot body combination, the handle anti-scalding has the role of preventing scalding, but also has a Decorative role, the top in the parcel of coloured rope and pendant, the overall dynamic and interesting, quite a classical charm.



**Figure 1** Natasha Duda's work  
(Source: Puxiang.com)



**Figure 2** Square inch clay Shadow Ching porcelain side handle teapot Image from the Internet  
(Source: Adib, 2023)

Ceramics and wood parts can be divided into two individuals, they each have their use function, indispensable, such a combination of methods in the design is often used by designers, and products on the market are also relatively common types. It is in the process of choice and requirements are not high, needs designers on the overall shape and function of the design and consideration, control ceramic moulding part of the shape of the regular, wood according to the style and size of the moulding to match the output can be. Wood and ceramic tea design combined with the design and processing technology is more mature, but also designers choose more of a material.

## 5.2 The combination of metal materials and ceramic tea set application

A ceramic tea set and the combination of metal materials is also one of the designers often choose to create, the combination of the two and collision can produce a unique artistic effect and functional wash design, metal material has its unique physical properties, usually, ceramic teapots will use metal spout (Figure 3, Figure 4), such as stainless steel or copper spout, the metal spout can be better control of pouring the flow of water, increasing the durability of teapots and Practicality; in ceramic teacups and teapots handle is also commonly used metal materials, such as stainless steel or copper materials; in teacups and teapots commonly used on the surface of the inverted silver material and brass material to do some workmanship, through the carving of the surface decorations or stickers (Figure 3), to increase the decorative and gorgeous sense of the tea set, with artistic value and appreciation value. In addition, metal material is also commonly used as some accessories in the tea set to participate in the design of the tea set, such as tea funnel, tea tray, tea tray, etc., which has practical functionality and utility, and at the same time, also enhances the diversity of the overall design. The use of metal material

characteristics, combined with ceramic tea design, with the diversity of ceramic tea, ceramic tea design provides more possibilities.



Figure 3 Tea Man's Notebook from the Internet



Figure 4 Ceramic Tea Set from the Qing Dynasty from the Internet

### 5.3 The combination of glass materials and ceramic tea set application

Glass materials and ceramic materials combined with three broad methods of fusion, sintering, and sol-gel method, according to the design approach is not the same choice of process, in the existing industrial materials, glass material with transparency and smooth corrosion resistance, but also through the chemical processing techniques for bending and deformation of shaping the shape of the form, so it can be through the design of modelling on the combination of its ceramic tea ware process, presenting a variety of modelling styles design, is a way to explore the diversity of ceramic tea ware form styles. A variety of modelling form style designs is also a way to explore the diversity of ceramic tea set form style, in the combination of ceramics and glass in the process, we need to measure the modelling style, the size of the precise measurement, usually using borosilicate heat-resistant glass blowing process and porcelain production is completed, with the gel adhesive bonding fixed. According to the idea of design and creation, you can also choose different colours of glass to decorate, glass material is fresher and more natural, but also more loved by the user.



**Figure 5a and Figure 5b** Taiwan Yilong EILONG ceramic glass tea set Jingyan composite material rose celadon glass teacup  
(Source: web,2023)

## 6 CONCLUSIONS

In the development of ceramic tea set design, designers through the appropriate materials to express different ideas, ceramic tea set design the material not only convey the language of art but also through different materials to convey a variety of concepts, to truly achieve the artist and the viewer of the art of aesthetic interaction. Ceramic art expression forms and aesthetic unity, and ceramic tea set as a product, the first key lies in the function first, so in the consideration of the expression of the concept, the selection of materials at the same time, but also pay attention to the material has the practicality of expression. Combined with different materials to create a unique aesthetic effect, and improve the practicality and durability of the tea set, through the combination of ceramic tea set and a variety of materials, designers can break through the traditional scope of creation, to create more innovative and personalized tea works, enriching the artistic expression of tea culture, and improve the appearance of the ceramic tea set feeling as well as the use of experience.

## ACKNOWLEDGEMENT

No acknowledgment to anyone is necessary.

## FUNDING

No financial aid was received.

## AUTHOR CONTRIBUTIONS

Author's individual work covers data collection, analysis and writing etc.

## CONFLICT OF INTEREST

No conflict of interests.

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