

Research on the application of structure and materials in tea packaging design

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Abstract

This study explores the application of structure and materials in tea packaging design and their impact on protection performance, user experience and brand image. Through case analysis, it reveals how scientific design and material selection can improve shelf life, experience and competitiveness, and pays attention to the application trend of environmentally friendly materials and their role in cultural expression and brand value. This study provides theoretical and practical guidance for tea packaging design, and promotes its functional, environmental and aesthetic development. The research results are as follows: (1) Reasonable structural design effectively protects tea leaves, improves packaging convenience and aesthetics, and enhances consumer experience. (2) Material selection affects the shelf life and brand image of tea leaves. High-quality materials extend the shelf life and give the packaging a high-end texture. (3) The application of environmentally friendly materials has gradually become a trend, meeting consumers' demand for sustainable development and enhancing brand competitiveness. (4) The combination of structure and material not only realizes the basic functions of packaging, but also enhances brand value through design innovation.

Keywords: Tea packaging design, structural design, material selection, environmentally friendly materials

1. Introduction

The design of tea packaging plays a crucial role in the preservation, transportation, and marketing of tea products. As consumers become increasingly discerning, the demand for

innovative and functional packaging has grown significantly. The application of structure and materials in tea packaging design is not only about creating visually appealing products but also about ensuring that the tea remains fresh, is easy to handle, and reflects the cultural heritage associated with tea. This paper explores the pivotal role that structural design and material selection play in enhancing the overall functionality and aesthetic appeal of tea packaging. By examining various examples and case studies, this research aims to provide insights into how designers can leverage different structures and materials to meet the evolving needs of both producers and consumers in the tea industry. Through a detailed analysis of the interplay between design elements and material choices, this paper seeks to contribute to the ongoing discourse on sustainable and effective packaging solutions in the tea market.

Research objective:

1. Analyze the application of structure and materials: Explore the effect of packaging structure and material selection on tea preservation and transportation and its impact on consumers.

2. Explore innovation and sustainability: Analyze design trends, combine traditional and modern materials, and evaluate the feasibility of environmentally friendly materials.

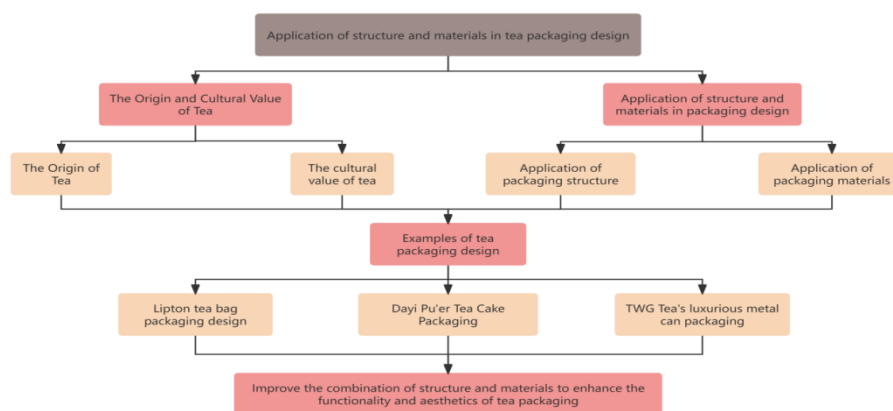
3. Evaluate consumer experience: Study the impact of packaging design on ease of use and brand recognition, collect feedback, and focus on the balance between function and aesthetics

2. Methodology

Tea packaging design needs to integrate structure, materials and cultural elements to protect the product and convey brand culture. The design should balance practicality and aesthetics, while showing cultural heritage and innovation and reflecting personalized characteristics. Based on the above analysis ideas, we will use the following methods for research:

Data collection is an important part of studying tea packaging design. The application of structure and materials is understood through literature, physical samples and case analysis. The reliability and authority of the data must be ensured. Through expert experience and literature combing, combined with databases such as CNKI, its specific application is studied from multiple angles. Compare theory with actual cases, and analyze how structure and materials are combined to meet protection, aesthetic needs and brand cultural expression. Systematic collection and organization of data will help explore the innovative trends and cultural expressions of packaging design, and provide theoretical and practical support for future development.

This article explores how modern tea packaging displays the charm of traditional Chinese culture through the combination of structure and materials. The design not only focuses on product protection and market competitiveness, but also deeply explores traditional cultural elements, and enhances brand cultural value and market influence through innovation. While meeting aesthetic needs, tea packaging demonstrates cultural confidence, establishes a distinct cultural identity, and promotes the inheritance and development of Chinese culture. The main conceptual framework of this study adopts the following mind map:



Research methodology

(1) Starting from the importance of structure and materials, we collected information and conducted group discussions to deeply explore their role and influence in modern tea packaging design.

(2) Systematically analyze the collected data through the following methods:

a) The intrinsic meaning and relationship between tea packaging structure and materials

b) The application of structure and materials in tea packaging design, and evaluate their integration and effectiveness

c) The adaptability and uniqueness of tea packaging structure and materials in different cultural backgrounds and markets

(3) Analysis of the connotation and value of structure and materials in tea packaging design

(4) Analysis of the integration of structure and materials in tea packaging design

(5) Through case analysis, reveal the functionality and profound cultural connotation of the application of structure and materials in tea packaging design.

(6) Conclusion and Outlook

1. The Origin and Cultural Value of Tea

Tea culture has a profound connotation, integrating the philosophical ideas of awe of nature, self-cultivation and harmonious coexistence, inheriting Chinese etiquette and life wisdom. It is a cultural bridge between traditional and modern life and has a unique artistic charm.

History: Tea culture originated in the Shennong era. After thousands of years of development, it has formed unique tea tasting methods and etiquette in the north and south. It has been integrated into literati tea tasting and folk tea banquets, and is deeply rooted in the daily life of the Chinese people.

Tea packaging and form: Tea culture symbolizes harmony, wisdom and etiquette, and embodies elegance, tranquility and friendship. In festivals, gatherings and other occasions, tea is the

center of etiquette, promoting communication and pleasure. It reflects the Chinese people's understanding of nature and life, and has become an important medium for conveying friendship and cultural confidence.

2. Application of structure and materials in packaging design

In packaging design, the selection and application of structure and materials are crucial, as they directly affect the product's protective function, consumer experience, brand image, and packaging's environmental performance. A successful packaging design is usually an organic combination of structure and materials, and meets multiple needs through scientific and reasonable design.

2.1 Application of packaging structure

The packaging structure is not just the outer shell of the product, it determines the safety and stability of the product during transportation, storage and display. The quality of the structural design directly affects the ease of use, durability and protection of the product.

2.1.1 Protection function

The primary function of packaging is to protect the product. The structural design should ensure that the product will not be damaged during transportation and storage. Different products have different protection requirements, such as fragile products need a buffer structure, and liquid products need a leak-proof design. Through reasonable structural design, packaging can effectively prevent products from being affected by the external environment such as moisture, oxygen, light, etc.

2.1.2 Convenience and functionality

Structural design should also take into account the convenience of use. Consumers' experience with packaging directly affects their satisfaction with the product. Convenient unsealing methods, reusable structures, and designs that are easy to stack and store are all important factors in improving consumer experience. For example, structural designs such as

cans and open bags are widely used in daily life, precisely because they are recognized by consumers for their convenience of use.

2.1.3 Display and brand communication

Structural design is also an important part of the product's brand image. A unique packaging structure can make a product stand out on the shelf and attract consumers' attention. For example, some high-end products use unique geometric packaging to highlight the brand's personality and high-end feel. In addition, structural design also needs to consider how to convey brand information through packaging, such as the product's window design allows consumers to see the product intuitively, thereby increasing trust.

2.2 Application of packaging materials

Materials are the basis of packaging design. They not only affect the physical properties of packaging, such as strength, flexibility and durability, but also affect the environmental friendliness, aesthetics and cost of packaging.

2.2.1 Material selection

Different materials have different characteristics and are suitable for different packaging needs. Common packaging materials include paper, plastic, glass, metal, cloth, etc. Paper materials are light and easy to print, suitable for most consumer product packaging; plastic materials have good water resistance and flexibility, and are widely used in food and liquid packaging; glass materials are transparent and have good airtightness, and are often used in high-end food and beverage packaging; metal materials are strong and durable, and are mostly used in protective packaging, such as cans and aerosol packaging.

2.2.2 Application of environmentally friendly materials

With the enhancement of environmental awareness, the selection of materials in packaging design is gradually shifting towards environmental protection. The use of degradable materials, renewable materials and recyclable materials has received more and more attention. For

example, paper packaging made of renewable resources and degradable bioplastic packaging are popular in modern design. In addition, material reduction design (that is, reducing the amount of material used without affecting the function of the packaging) is also an important way to achieve environmental protection goals.

2.3.3 Material innovation and technological progress

Material innovation and technological progress have brought more possibilities to packaging design. The application of composite materials and biomaterials provides more options for packaging design. For example, some high-barrier composite materials can effectively extend the shelf life of food, while lightweight but high-strength materials can reduce transportation costs. In addition, the application of smart materials, such as temperature-sensitive materials and color-changing materials, brings more interactivity and fun to packaging design, improving consumers' experience.

3. Synergy between structure and materials

In packaging design, the synergy between structure and material is crucial. Structure determines shape and protection function, while material affects performance and durability. Reasonable matching can improve protection effect and user experience, while taking into account aesthetics and environmental protection, conveying brand image and promoting sustainable development.

4. Examples of tea packaging design

4.1 Lipton tea bag packaging design

As a world-renowned tea brand, Lipton's products include tea bags and loose tea. The packaging design focuses on convenience, environmental protection and consistency of brand image. Tea bags are individually packaged in aluminum foil composite paper bags, which are moisture-proof and anti-oxidant, easy to carry and use, and the bag mouth is sealed through a heat-sealed process to improve the sealing. Multiple tea bags are packaged in paper boxes

printed with brand designs, which not only protects the tea bags but also facilitates access. Aluminum foil is moisture-proof and light-shielding, and the inner filter paper is breathable and moisturizing to ensure the release of tea fragrance. Lipton's packaging uses simple and practical design and high-quality materials to balance user experience and environmental responsibility, highlighting brand quality.

4.2 Dayi Pu'er Tea Cake Packaging

As a well-known domestic brand, Dayi Pu'er Tea is famous for its traditional tea cakes and cultural connotations. Its packaging combines tradition and modernity, highlighting the natural attributes and cultural value of tea. The tea cakes are packaged in multiple layers: the inner layer is breathable tissue paper, which is conducive to the natural fermentation of tea leaves; the middle layer is kraft paper or corrugated paper, which is moisture-proof and dust-proof; the outer layer is a beautiful paper box or traditional bamboo basket, which adds a sense of culture. The packaging material focuses on environmental protection, using natural tissue paper and reusable kraft paper. This design not only protects the quality of tea, but also strengthens the brand's cultural identity.

4.3 TWG Tea's luxurious metal can packaging

As a luxury tea brand, TWG Tea is famous for its exquisite tea leaves and high-end packaging. Its metal can is made of high-quality materials, which is light-proof and moisture-proof, ensuring long-term preservation of tea. The sealing cap is rotated or buckled to enhance sealing, and the tank is decorated with exquisite relief, hollow patterns and gold foil designs, highlighting its luxurious positioning. Comes with a foil or paper bag inside for extra protection. The overall design pays attention to details and quality, perfectly displaying the brand's luxurious image.



Figure1 Lipton tea bags

Photo source: Baidu Encyclopedia, 2024, intercepted



Figure2 Dayi Pu'er Tea

Photo source: Baidu Encyclopedia, 2024, intercepted



Figure3 TWG Tea

Photo source: Baidu Encyclopedia, 2024, intercepted

Conclusion

In tea packaging design, structure and materials are the key to protecting products, shaping brands and optimizing user experience. Reasonable structure can prevent the influence of moisture, light and air, improve convenience and aesthetics; high-quality materials such as aluminum foil and metal cans extend the shelf life and convey a high-end image. With the improvement of environmental awareness, degradable or recyclable materials have become a trend to meet consumers' expectations for sustainable development. The combination of structure and materials not only realizes the packaging function, but also adds value to the brand through innovative design and environmental protection concepts.

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