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DECORATIVE EFFECTS IN APPLIANCE DESIGN: ECOLOGICAL IDEAS

YIN Jing^{1,2}, KROTOVA Tetiana^{1,2}

¹ Kyiv National University of Technology and design, Kyiv, Ukraine

² Shaanxi University of Science and Technology, Xi'an, People's Republic of China
1530821551@qq.com

This paper reveals the aesthetic expression of the sustainability of household appliances from the perspective of pattern design, and discusses the realization of graphic pattern from decorative effect to ecological expression. Based on the essence and methods of design science, it gives products a new visual aesthetic sense through graphic design, and provides an innovative path for the sustainable eco-transformation of the home appliance industry.

Key words: pattern design, home appliances, sustainability, graphic design, ecological aesthetics

INTRODUCTION

Patterns are flexible and plentiful graphic decorative effects present on a product. As an important part of product design, pattern design plays a vital role in the aesthetics and recognizability of products. In the design of home appliance products, it is a low-cost and sustainable operation to enhance the aesthetic appearance of home appliance products through pattern design. At the same time, the pattern composition determines the first visual overall impression of the product appearance, which influences consumers' purchasing decision and thus strengthens the brand image. In addition, pattern plays a very important role in product recognition, the iconic pattern not only represents the brand's value and concept, but also allows consumers to quickly identify the products belonging to the brand.

PURPOSE

The purpose of this research paper is to explore the strategy of pattern design in sustainable home appliances. The pattern design of home appliances can increase the added value of the products and make the appearance of the products personalized and fashionable. By analyzing the effect and role of decorative patterns in the process of conveying concepts and design semantics, the sustainable design concepts are visually transmitted, and the transformation and application of graphic patterns from ecological aesthetics to sustainable aesthetics is realized.

RESULTS AND DISCUSSION

Pattern texture design is an intuitive design language for products. Pattern symbol is a material means to express thoughts and feelings, relying on the role of



pattern symbol can spread the concept of sustainable design, pattern is an important design element in the appearance modeling symbol language of household appliances [1].

The pattern design of home appliances usually includes two aspects. On the one hand, the visual pattern design for decorative effects, and on the other hand, the design of icons and symbols for electronic operation interfaces or indicative. Usually, patterns for decorative effects play a greater role in conveying concepts and design semantics. Similarly, the visual communication of sustainable design concepts is often realized by graphic pattern design in home appliances. Part of the pattern is material-related, such as wood grain, leather, and fabric, which can be expressed in combination with material selection and finishing processes. Some patterns are created through art and are used as decoration or embellishment of the product from the perspective of visual communication.

First, use natural elements as decorative patterns. In the research process of pattern creativity of home appliance product panels, the decorative pattern design usually selects representative and typical design elements related to the concept of environmental protection, such as water drops, leaves, simple lines and other natural forms, emphasizing the relationship between man and nature in harmony (Figure 1). Natural patterns are usually simplified, refined and deformed to form decorative patterns in home appliances, which are systematically applied to present the transfer of meaning and decorative aesthetics related to the concept of sustainability. Through the design of natural patterns to evoke the emotional resonance of users, so that users can feel the beauty of nature, so as to enhance the consumer's awareness of sustainability.

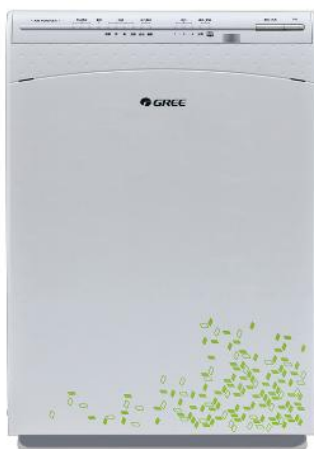


Fig. 1 Air purifier, Company Gree, China [3]



Second, reasonable design of energy efficiency labels for home appliances. Energy efficiency labels of household appliances are also a part of the product design. It is categorized as pattern design because labels are pictorial information, which is an important way to convey in graphic vision. Although the pattern of the label is defined, it was found in the research that users do not pay enough attention to the energy efficiency label. Use a pattern of natural elements as the background in the area where the energy-efficiency label is affixed, or use a halo effect to guide the focus of the eye and set off the content of the label. Energy efficiency labels are an important part of sustainable home appliances. Compared with traditional labels, in the future, energy efficiency labels will be designed into a dynamic form to facilitate users to check product energy consumption information at any time, which is an effective way to transform from pattern design to interactive design.

Thirdly, combining the brand characteristics of household appliance to form pattern recognition with product genes. Integrating the brand's logo, style, classic pattern and other iconic elements into the product design means that the enterprise's philosophy and values are transmitted to the user through the product, which extends the perceived value of the product and reduces the chance of being eliminated due to the outdated style (Figure 2). Long-term brand vision construction and improvement will help to form brand style, which is an effective way for enterprises to occupy competitive advantages in the sustainable development [2]. In addition, if enterprises take the concept of sustainability as a development strategy, and carry it as the core of the brand image design, it can further emphasize the environmental image of the brand.



Fig. 2 Ice Bar, Company HCK, Finland [4]



CONCLUSIONS

From the perspective of pattern design, the concept of sustainable design generally entails the redesign and application of natural elements, as well as the effective use of energy-saving labels, to establish a representative brand visual identity. This visual identity serves to communicate the value of home appliances from the dual perspectives of cultural sustainability and environmental sustainability.

Studying the expression of home appliances in pattern design is also an effective way to enhance the competitiveness of products through graphic design. Based on the theory and method of sustainable design, effectively guiding the design direction of decorative patterns in home appliances can shape users' sustainable consciousness and behavior from vision to psychology. Graphic design elements with sustainable concepts can realize the unity of ecological theory and technical aesthetics in information transmission through the systematic construction of visual language, and reconstruct the expression path of graphic design in home appliances from the dimensions of material carriers, semantics of symbols, and communication mechanisms. In the future, the research will ensure that visual representations and substantive environmental initiatives form an effective value closed loop, deepen design thinking, and promote sustainable value reconstruction at the visual culture level.

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Інь Цзінь, КРОВА Т.

ДЕКОРАТИВНІ ЕФЕКТИ В ДИЗАЙНІ ПОБУТОВОЇ ТЕХНІКИ: ІДЕЇ ЕКОЛОГІЇ

У дослідженні розкривається естетичне вираження стійкості побутової техніки з точки зору дизайну візерунків та обговорюється реалізація графічного візерунка від декоративного ефекту до екологічного вираження. На основі сутності та методів дизайнерської науки вона надає продуктам нового візуального естетичного сенсу за допомогою графічного дизайну та пропонує інноваційний шлях для стійкої екологічної трансформації галузі побутової техніки.

Ключові слова: дизайн, візерунки, побутова техніка, стійкість, графічний дизайн, екологічна естетика.