

Discussion on the Application of Green Design in Sanitary Products

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Abstract: In recent years, the green design is the hot topic in product design area. The rise of green design with extensively applied is changing gradually the economic growth method, which takes a great deal. The product that defend bath is based on current production is very practical process resource consumption and the analysis of the influence on the environment, puts forward the "green design". Make sanitaryware product design as saving resources, outstanding green design basic goal, in product modelling, function, itself and aspects, with green design principles.

Keywords: Sanitaryware product design; Green design; Application

1. Introduction

This article applies green design in the design of sanitary products, and creates a form of sanitary products in a more responsible way. Under the condition of satisfying the basic functions of the products, the product structure is simplified as much as possible, and the market is captured with a more concise and long-lasting shape. Demand, while paying attention to the appearance design, popular color matching and various functional matching, try to absorb high-tech elements, pay attention to comfort, water saving and humanized features to extend its practical life as much as possible to achieve green and environmentally friendly sanitary ware.

2. Overview of Green Design

Green design is also called ecological design, environmental design, life cycle design or environmental awareness design. Although the name is different, the connotation is the same. It is the product with the least impact on the design and manufacturing life cycle environment. Therefore, it is often Change to use. Green design can also be considered as the product design of the principle of green technology. It is a general term for technologies, processes or products that reduce environmental pollution or reduce the use of raw materials and natural resources. The green design is oriented to the whole life cycle of the product, from the cradle to the reproduction process. That is to say, to fundamentally prevent environmental pollution, save resources and energy, the key lies in design and manufacture, and can not wait for the product to produce adverse environmental consequences. Take prevention and implementation.

In a nutshell, green design is to rethink the environmental attributes of the product throughout the life cycle, and it can be recycled, maintainable, repeatable, and detachable.

At the same time as the target requirements, ensure the function, service life and quality of the product. These energy-intensive companies like the ceramic industry must assume "environmental responsibility". Human material production is always achieved through the transformation of nature.

Building ceramics enterprises are one of the most important consumers of natural resources. Therefore, they must take the responsibility of resource conservation and environmental protection, vigorously promote energy conservation and emission reduction, and focus on building a resource-saving and environment-friendly society.

3. The Formation of Green Design and the Content of Ideas

The green design is mainly formed in order to make the product produce a cycle of specific environmental protection requirements, the ecological environment is harmless or less harmful, the resource utilization is the highest, and the energy consumption is the lowest. The main contents of its research include: material selection for green design, recyclability design of products, detachable design of products, and cost analysis of green products.

3.1. Material selection for green design

Green design requires product designers to change the traditional material selection procedures and procedures, to understand the environmental impact of materials, choose non-toxic, non-polluting materials and materials that are recyclable, reusable, and easily degradable, especially in the bathroom industry. The industry pays the most attention. Sanitary ware materials should be combined with scientific materials to produce suitable and comfortable products. We should carry out scientific management of two aspects of green materials. On the

one hand, we cannot mix harmful ingredients with harmless ingredients: on the other hand, we must carry out partial recycling and use non-recyclable products with certain processes. The way it is handled, so that its impact on the environment is reduced to a minimum.

3.2. Green design of the product's recyclable line

Recyclability is a series of problems that fully consider the recycling possibility of the parts, the recovery value, the recycling treatment method, and the recycling process structure processability equal to the recovery property in the initial stage of product design. Ultimately, it must reach the maximum utilization of the material resources and energy of the parts. A design idea and method with minimal pollution. The concept of bathroom product design, the need to reuse energy, combined with the concept of bathroom furniture design, to promote the beauty and importance of nature. The designer uses the natural materials with a cautious attitude, and constantly develops new materials through technology, and meets the environmentally-friendly and sustainable materials. It also gives the bathroom furniture a variety of new styles, including the five elements of Gold, Wood, Water, Fire, Earth. The combination of materials also allows the plastic material to be naturally oxidized in the earth through plant fiber cell molecules, or to achieve 100% recycling and reuse, to create more design concepts that love the earth and love nature, and show the green life of the future world.

3.3. Green design of product detachability

The detachability of the product requires the designer to use the detachability as a standard for the evaluation of the structure when designing the product, so that the designed structure is easy to disassemble, easy to maintain, and can be fully and effectively recycled after the product is scrapped. Reuse. To achieve the purpose of saving resources and energy, and protecting the environment. The detachability requires a change in the traditional connection method during product design instead of an easy-to-remove link. A new wash basin with a detachable split in the bathroom design. Its detachable bathroom sink is the biggest feature in solving space problems. In a compact city, the compact space, ideally, is to make more room for the bathroom.

4. The Application of Green Design in Bathroom Products

With the improvement of people's living standards and the improvement of living environment, sanitary ware products have been from the past people's eyes, the color is single, the appearance is simple, rough, and the function is backward. Nowadays, it has developed into a variety of varieties, beautiful shapes, advanced functions and complete facilities. Daily necessities." People's pur-

chase of sanitary ware has also begun to focus on practicality, appearance, color, etc., and gradually shift to focus on environmental protection, energy conservation, and comfort. Therefore, applying green design to sanitary design is a sustainable path.

4.1. Humanized green bathroom design

Green bathroom design not only requires designers to consider how to ensure the safety of product producers and users, but also requires products to meet the relevant principles of ergonomics, aesthetics, etc., so that the products are safe, reliable, operability, comfortable and pleasant. In other words, a good green bathroom product design not only requires minimal damage to people's physical and mental health during the whole life cycle, but also requires the product to be used comfortably. In the design of sanitary ware, designers should always take people-oriented core design, fully consider the pleasantness and safety, use high-tech means to improve modern sanitary ware, improve its practical functions, and design Injecting ideas, culture, and technology, the sanitary wares are different in shape, glazed and colorful, constantly satisfying people's mental and spiritual needs, allowing people to experience the high level of integration of technology, culture and art in the era while using comfort and convenience. This kind of humanized design can make the design of the bathroom more vivid.

4.2. Multi-functional green bathroom design

Functional, advanced and practical are the fundamental principles of green bathroom design. The ultimate goal of the green design bathroom meter is to provide users and the society with green products with advanced functions. There is absolutely no market for design that does not meet customer needs. Self-cleaning sanitary ceramics design is a green product that needs to be developed this year. Sanitary ceramics have developed a highly glazed self-cleaning glaze, or coated with nano-materials to form a surface hydrophobic layer, so that the surface of the product has a self-cleaning function. No water, no pollution, no scaling, and the hygienic performance is greatly improved. There are also antibacterial products designed to add silver oxide, titanium dioxide and other materials to the sanitary ceramics. The surface has a bactericidal function or a bactericidal function under photocatalysis, and the hygienic properties mentioned are mentioned.

4.3. Material selection green bathroom design

When using energy types in sanitary design, use renewable energy as much as possible, optimize energy structure, and minimize the use of non-renewable energy to effectively mitigate the energy crisis. Through design, we strive to minimize energy consumption throughout the product life cycle to reduce energy waste. At the same

time, reduce environmental pollution caused by these wasted energy. Similar ceramic bathtubs will completely withdraw from the market. The ceramic bathtub is crushed, the qualification rate is low, and the raw materials and combustion consumption in the production process are large. It should be replaced by acrylic, cast iron enamel, steel enamel and other materials. Ceramic shower trays are cumbersome, material, and fragile, and are gradually being replaced by steel enamel materials.

5. The Development Trend of Green Bathroom Products

In the past 20 years, the building sanitary ceramics industry has undergone tremendous changes and developments. From quantity to quality, brand development, and after the "Eleventh Five-Year Plan", the theme of development is "green". We must keep abreast of the trend of the development of "green sanitary ware", the use of raw materials in the sanitary ware manufacturing, the use of recycling or waste treatment, reduce the load on the earth's environment, and intensify the green design and development of building sanitary ceramics that are beneficial to human health. From the perspective of the bathroom industry, the development of green sanitary ware is a sustainable road. It is the best way to produce brilliant products, improve the quality of products, extend the service life of products, and enhance the functions of products so that they can make the best use of them.

6. Conclusion

The design concept and method of green design aims to save resources and protect the environment. The design concept of green design is aimed at conserving resources and protecting the environment. It emphasizes the protection of natural ecology, the full use of resources, people-oriented, and the environment. Green design is more than just an initiative or proposal. It should become a reality and a future direction. In the face of the current global environmental pollution, ecological damage, waste of resources, greenhouse effect and resource misconduct, every person on earth should feel the crisis of survival.

The requirements of social sustainable development indicate that "green design" will be one of the hot spots in the design of sanitary products. In the modernization of today, "green design" is not only a fashionable slogan, but a matter of truly relating to the vital interests of everyone. This will be immeasurable for future generations and their contribution and influence to the entire human society.

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