



Research on the Development and Development of Sustainable Design in the Textile and Garment Industry under the Goal of "Double-Carbon"

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Abstract: Textile and garment industry is an important part of China's social economy. In the development process of this industry, sustainable garment design has attracted more and more attention, mainly because it can reduce carbon emissions, protect the environment, and then promote the long-term development of the textile and garment industry. In the past, there were big problems in the textile and clothing design work. Due to the limited design concept, a lot of waste fabrics and harmful gases were produced in the links of clothing design and production, which deviates from the current green development concept. Under the goal of "double carbon", the textile and garment industry needs to establish the development concept of environmental protection and emission reduction, and to optimize and improve the previous design concept and methods, so that it can achieve the goal of sustainable development.

Keywords: "double-carbon"; textile and clothing; sustainability; design development

1. Introduction

In recent years, people's awareness of environmental protection has been gradually enhanced, and China has also put forward the concept of green and sustainable development for the development of various industries and fields. In the development of the textile and garment industry, we should also practice this development concept. If the textile and garment industry wants to maintain a sustainable development state, it needs to timely change the development concept, reduce the waste of resources, reduce carbon emissions, and reduce the adverse impact on the environment. Based on this, in the specific process of garment design, it is necessary to choose environmental protection materials, and also apply the technology of energy saving and emission reduction in the production process, so as to promote the design and development of the textile and garment industry to achieve the goal of "double carbon".

2. The important role of sustainable design development in the textile and garment industry

For the textile and garment industry, it is one of the earliest fields to realize the development of globalization. In the raw material supply, design, production, consumption and many other links, it is closely related to the changes of the world environment. With the continuous development of the social era, people's environmental awareness gradually increased, and resources also become more scarce, in this case, in clothing design, you need to ecological, economic, cultural and social fully consider the relationship between the four, also want to think about whether clothing design meet the requirements of environmental protection, energy saving and emission reduction. In the design of textile clothing, if can fully practice the idea of green environmental protection, energy conservation and emissions reduction, can reduce the damage to natural creatures, avoid using harmful chemicals, pollution to the environment, ensure the quality of textile and clothing production, reduce energy resource consumption, promote the realization of the goal of "double carbon", protect the social and natural environment [1].

3. Current situation and problem analysis of sustainable design development in textile and garment industry

3.1 The status quo

At present, the carbon emissions of the textile and garment industry have been ranked among the top in the world, which has caused serious pollution and damage to the natural ecological environment. The investigation and research show that a garment will release more than 1 kg of carbon dioxide in the atmospheric environment from the whole process of material production, design and production, and the best product. It can be seen that the textile and garment industry has a great ad-

verse impact on the environment. This industry plays an important role in China's social economy. If we want to implement the low-carbon development concept for the textile and garment industry, it is necessary to change it to promote the effective transformation of this industry, so as to promote the sustainable development of the textile and garment industry.

3.2 Problems

First, in China's textile and garment industry, sustainable design is a new concept. The industry does not have perfect policies, system and supporting systems for sustainable design, which leads to the lack of driving force for sustainable design, and also causes certain obstacles for the bottleneck breakthrough in the textile and garment industry [2].

Second, if we want to promote the sustainable design development of the textile and garment industry, a complete industrial chain is needed. With only a single culture, technology or other elements, it is difficult to support the sustainable development of the whole industry, and the support of more resources and elements is needed. With the passage of time, design has become a cross-cutting discipline, which itself has a high complexity, and is dynamically developed, which also makes the clothing design and evaluation standards change accordingly. Nowadays, in the sustainable design of clothing, we should not only consider its economy, but also fully consider the environment, resources, society and other issues.

4. Under the "double-carbon" goal, the sustainable design and development strategy of the textile and garment industry

4.1 Sustainable design in the era of big data

When implementing the design concept of sustainability, the textile and garment industry can organically combine it with the development model of "Internet +". With the support of big data technology, it can make a comprehensive analysis of the raw materials, resources and market conditions needed for garment design, and accurately calculate the combination proportion of garment design materials with maximum economic benefits according to the specific sales status and earnings of the garment market. In addition, the textile and garment industry to consider all aspects, for example, environment, resources, economy, etc., on the basis of this, design the appropriate sustainable clothing design standards, using big data technology, analyze the smallest negative impact on the environment ratio of clothing materials, set it for the sustainable clothing design reference, and in the initial design of clothing, to give full consideration to environmental protection, enable it to truly practice the sustainability of the design concept, and help enterprises to carry out the internal control work [3]

4.2 Clothing design based on the concept of development

4.2.1 Green clothing design

Aiming at the whole industrial chain of the textile and garment industry, when carrying out the whole process of garment design work, the impact of the garment design scheme on resources and environment should be comprehensively considered. In the whole life cycle of clothing, both to clothing raw materials, manufacturing, trade, and other industrial chain link to fully consider, see whether it meet the environmental requirements, and scientific optimization of the whole garment production process, reduce the garment production of adverse effects on human, makes the garment production cycle can meet the requirements of sustainable development. Specifically, is in the process of design clothing, to choose green environmental protection raw materials, avoid choose toxic and harmful materials, for production process also need to improve, reduce carbon emissions, make the final production of clothing products conform to the environmental standards, but also has high functional and aesthetic, to promote the sustainable development of the garment industry.

4.2.2 Ecological clothing design

Nowadays, environmental pollution and resource shortage are becoming more and more serious, and many non-renewable resources and energy have been exhausted. In this situation, it is necessary to introduce the sustainable design concept in the textile and garment industry, which has also become one of the important criteria for evaluating excellent garment design. In the design of clothing, priority should be given to its own environmental attributes, to confirm whether they meet the relevant requirements of ecological and environmental protection, and then consider its overall quality, function and cost. Especially in the selection of raw materials, to avoid affecting the normal operation of the ecological environment, at the same time, do not choose scarce resources, you can study and innovate environmental protection materials, to ensure their comfort, play an important role in protecting the ecological environment [4].

5. Recycling clothing design

So-called cycle design, also known as recyclable design, based on sustainable design concept, the clothing design, to clothing parts, surface accessories recycling consideration, analyze the recycling value, recycling materials, etc., by choos-

ing recyclable materials, clothing design, can guarantee the overall quality of clothing, can also improve the utilization of resources, avoid resource waste, also can reduce clothing waste, so as not to cause pollution to nature. For the recycling and recycling of clothing, its potential value can also be effectively improved.

summarize

Based on the "double-carbon" goal, sustainable design in the process of the development of the textile and garment industry can enhance the green performance of the industry, which can not only obtain good economic benefits, but also avoid adverse effects on the ecological environment. Therefore, the textile and garment enterprises should pay attention to the sustainable design, and promote the effective transformation of the garment industry structure, and increase the intensity of environmental protection.

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