

Study on the Application Mode and Legal Protection of Green Materials in Medical-Nursing Combined Building

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Abstract. In the context of green development, green materials are the future trend of Medical-Nursing Combined building. This paper summarizes the concept and types of green building materials. Then, on the basis of existing research, it constructs the green material system framework of Medical-Nursing Combined building, puts forward the application mode of green building materials, and studies the policy and legal protection of green material application.

1. Introduction

Medical-Nursing Combined mode is a new mode of providing for the aged, and is an important measure to solve the problem of old-age support caused by the aging of the population. At present, the standard of Medical-Nursing Combined building is not perfect, and the accidents of safety and quality are frequent. In the construction industry "green" trend, to explore the application of green materials in Medical-Nursing Combined building, is of great significance to create a safe and comfortable environment and promote the old-age care standardization.

From the existing literature, in 1986, Britain began to adopt the classification method of residential buildings proposed by HTA. The United States implements the communities that can continue to live and care. Japan vigorously promotes small-scale home care. In order to improve the living quality and the dementia care, Swedish creating a "shared home".

The research of Chinese scholars in this field is mainly embodied in two aspects. First, analyze the construction of pension facilities. Chen Yang (2013) put forward the concept of "Medical-Nursing Combined Building", and discussed its construction strategy and method under the mode of community support for the aged. Luo Deqi(2004) explained the design principles and suggestions for the residential environment and facilities of the elderly in the context of human settlements. Second, based on the needs and characteristics of the elderly, put forward the design strategy suitable for the elderly. Zhou Yanxia (2013) divided the pension facilities into living space, public activity space, public service space and traffic space. On the basis of the activities and life demands of the elderly, she put forward the general plan of each space. Zhou Bo (2009) conducted a field investigation of the nursing home, classified the life behavior and the corresponding spatial factors of the elderly, and explored the relationship between them in the process of architectural design. Zhao Xiaozheng (2010) studied the whole construction process of the pension facilities, and combed the whole process from the pre project planning to the project operation management.

At present, the existing related research has some academic and application foundation, and it has positive significance to solve the problem of the building for the aged. However, most of the current studies mainly focus on improving the efficiency of nursing, and lack the deep care for the elderly. In view of the social background, the economic situation, the population distribution and the cultural



idea, the Medical-Nursing Combined mode of any country can not be copied directly. In the future research, we can find a breakthrough from the advanced experience abroad, and try to structure a suitable Medical-Nursing Combined building.

2. The concept and categories of green building materials

In the context of green development, green building materials are the future trend of Medical-Nursing Combined building.

2.1. The concept of green building materials

Green building materials, also known as ecological building materials or environmentally friendly building materials. It refers to the building materials which use clean production technology, less consume or no consume the natural resources and energy, and more conducive to health and environmental protection. The green building material has the characteristics of light regulation, temperature regulation, noise elimination, heat insulation, antistatic, etc., which can minimize pollution, protect the environment and provide a healthy environment for the elderly.

2.2. Categories of green building materials

The sustained and rapid economic development has provided opportunities for the development of the Medical-Nursing Combined building materials industry. The wide application of green building materials is an important means to develop the Medical-Nursing Combined building with the concept of national green development.

Saving type of green building materials. Traditional building materials are purely natural, and the manufacture of building materials requires the consumption of mineral resources as a price. Green building materials through the substitution of raw materials to achieve resource conservation, to avoid damage to the natural environment.

Environmental type of green building materials. Pollution-free, non-toxic and radioactive green materials, such as diatom mud, meet the goal of green living environment for the elderly, and have become the first choice for more and more people to buy building materials.

Space type of green building materials. Temperature control building materials, such as sun protection materials, heat insulation materials and heat radiation materials, optical building materials, such as light absorbing materials and reflective materials, etc., can be applied to the design of the Medical-Nursing Combined building.

3. Green material system framework of Medical-Nursing Combined building

Based on the product life cycle, this paper presents a structure of four layers of green material system framework of Medical-Nursing Combined building, including the product life cycle process layer, green technology layer, green evaluation and monitoring layer, green support layer.

The product life cycle process layer mainly includes materials, green design, manufacturing, green packaging, use, green recycling, green remanufacturing.

Green technology layer mainly includes: green design technology, green manufacturing technology, green packaging technology, green recycling technology, green remanufacturing technology.

The green evaluation and monitoring layer mainly includes: evaluation, data collection and process monitoring.

The green support layer mainly includes database and knowledge base, planning and standard, information support.

As shown in figure 1.

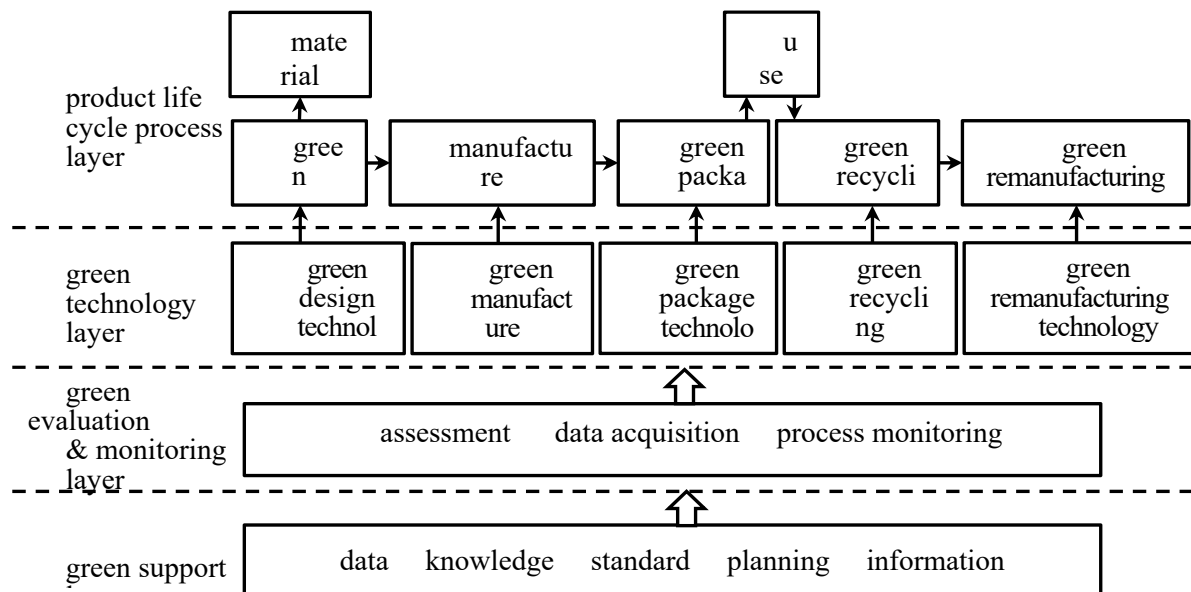


Figure 1. Green material system framework of Medical-Nursing Combined building

4. Application mode of green materials in Medical-Nursing Combined building

On the basis of the previous parts, this paper proposes a five level application mode of green materials in Medical-Nursing Combined building. As shown in figure 2.

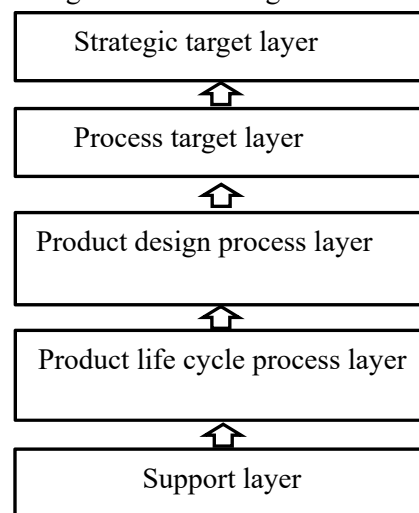


Figure 2. Application mode of green materials in Medical-Nursing Combined building

The first layer is the strategic target layer, that is to say, green building materials should pursue economic benefits and maximize the efficiency of sustainable development in the application.

The second layer is the process target layer, including six goals, such as time, quality, cost, service, resource consumption, and environmental impact. The main goals are: short production cycle, high product quality, low product cost, good pre-sales and after-sales service, less consumption of resources and small the environmental impact.

The third layer is the product design process layer, which mainly includes product design, material selection, manufacturing environment design, process design, packaging design, product recycling design and remanufacturing design.

The fourth layer is the product life cycle process layer, mainly including raw material acquisition, manufacturing process, product assembly, product packaging, product use and maintenance, product

recycling, processing and remanufacturing.

The fifth layer is the support system layer, which mainly includes: green design support system, clean production support system, management information system and environmental impact assessment system.

5. Policy norm and legal guidance

Policies and laws provide a guarantee for the application of green materials in Medical-Nursing Combined building.

Firstly, the government construction supervision departments should perfect policies on green building materials standards for specific quantification and standardization to medical-nursing combined building. The NPC will eliminate the fuzziness of definition and standard of green building materials through legal formulation and guide the construction enterprises and the public to consciously use green building materials.

Secondly, the government should also set up a reward system through policy and law, in order to improve the enthusiasm on green building materials development of production enterprises and green building materials use of construction enterprises.

6. Conclusion

Green building materials are effective methods and approaches to solve the problems of safety and quality of Medical-Nursing Combined building. This paper constructed the green material system framework of Medical-Nursing Combined building, put forward the application mode of green building materials, and studied the policy and legal protection of green material application.

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