A Research on the Sustainable Development of Civil Engineering and Construction Engineering in the New Period

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Abstract: In the new period, the development mode of civil engineering and construction engineering has changed greatly. We have made many achievements in our development, and the development of civil engineering and construction projects has also promoted the growth of the national economy. But at the same time of rapid development, we should also consider the quality of development. Only in this way can we realize the sustainable development of civil engineering and construction engineering. At present, there are still many problems to be solved in the sustainable development of civil engineering and construction engineering in China. Solving these problems is conducive to changing the development mode of the industry and achieving higher quality development.

1. Introduction

Great changes have taken place in the way our society develops. Now, we pay more attention to energy conservation and environmental protection, so civil engineering and construction engineering need to change the original way. We should use higher standards to require the construction industry. Buildings should not only be comfortable, but also ensure the health of residents. Therefore, architectural design should pay attention to energy-saving and environmental protection related content, we need to use targeted design to achieve energy-saving and environmental protection of buildings. In view of the problems of energy saving and environmental protection, civil engineering and construction engineering should analyze the constraints of energy saving and environmental protection, and realize the efficient use of various resources in the design. In the design, we should also consider the reasonable choice of materials. Therefore, civil engineering and construction engineering need to take into account many aspects of content, in order to achieve building energy saving while ensuring that the environment is not affected. The design scheme based on energy saving and environmental protection should comprehensively consider the relationship between residents and living environment, realize the efficient use of energy in the design, and realize the improvement of living environment. So civil engineering and construction engineering should not only ensure the use function of the building, but also improve the environmental protection and energy saving effect. Architectural design under the concept of energy conservation and environmental protection embodies various functions. Therefore, the designer should comprehensively analyze the regional characteristics of the building, and the design content should realize the health and humanization of the building itself. Designers should master the relevant methods of energy-saving and environmental protection design to realize the harmonious coexistence of people, environment and buildings. The design content should embody the ecological characteristics, ensure the use of various resources, especially to control the impact of building on the environment, improve building safety, comfort and health, and solve the problem of energy conservation and environmental protection.

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2. Connotation of civil engineering and construction engineering

Civil engineering and construction engineering have a long history. In the continuous development, it promotes the development of society. Civil engineering and construction engineering involve a variety of technologies, including many aspects. The development of civil engineering and construction engineering directly reflects the progress of construction technology. The construction of civil engineering and construction engineering is not only confined to the buildings on the ground, but also includes the construction of other parts, such as some projects occurring in water and underground, which also belong to the category of civil engineering and construction engineering. In addition, civil engineering and construction engineering also includes design, construction, post-maintenance and other links. At present, great changes have taken place in the way of social development, which is reflected in the way of development based on Sustainable development, and the implementation of sustainable development is a development strategy in line with China's national conditions.

3. Present situation of civil engineering and construction engineering construction in China

In the development of today's society, various industries pay more attention to sustainable development. In the field of civil engineering and construction engineering, in order to implement the strategy of sustainable development, construction methods have changed, and more attention is paid to environmental protection and efficient use of resources in construction. Green construction has received too much attention. But at the same time, considering the economic benefits, some builders lack initiative for environmental protection in construction. Although technology will be applied in construction to strengthen environmental protection in construction, how to ensure the implementation of green construction also needs to improve the relevant management. Some construction technology and management methods of construction project management have not been integrated into green construction. The concepts of green construction and ecological protection are relatively diluted. Green construction management also needs to ensure standardization. Some builders have misunderstandings about sustainable development, lack of supporting environmental protection system for construction management, lack of technical progress for green construction, and affect the implementation effect of sustainable development.

4. Suggestions on the sustainable development of civil engineering and construction engineering in the new period

4.1 We should advocate the concept of environmental protection.

At present, in the field of civil engineering and construction engineering, some people are still vague about the concept of green construction, there are misunderstandings in understanding, so the traditional construction methods are still used in construction. Strengthening green construction to promote sustainable development of the construction industry is not effective, so in order to carry out a wide range of publicity and knowledge of sustainable development concept, we need to pay attention to ecological environmental protection, and strengthen the penetration of the concept of sustainable development. In addition, in order to ensure the correct understanding of green construction, it is necessary to comprehensively understand sustainable development, master the main technology of green construction, and strengthen the education and training of environmental protection for construction workers. In addition, construction managers and technicians should also pay attention to improving personal quality, and builders should recognize the important role of sustainable development and take initiatives to strengthen green construction and environmental guarantee.

4.2 We should make efficient use of all kinds of resources.

In the construction of civil engineering and construction engineering, efficient utilization of

various resources is also an important measure to ensure sustainable development. In the construction, we should use reasonable design and technological progress to achieve land saving and energy saving, and reduce the damage to resources caused by construction. With the continuous progress of technology, the variety and quality of building materials have changed greatly on the premise of guaranteeing their functions. The change of building materials is reflected in the diversification of the functions of building materials, as well as in the energy saving and environmental protection of materials themselves. Therefore, the design of houses should take into account the application of various building materials, and realize energy saving and environmental protection in the design of materials. In view of civil engineering and construction engineering, designers comprehensively analyze the use characteristics of all kinds of materials to ensure the use effect of the selected materials and to ensure that the materials are conducive to energy conservation and environmental protection. Therefore, in the design, priority should be given to the green environmental protection materials developed by new technologies to eliminate the environmental pollution problems caused by building materials themselves. For example, in engineering design, can play the role of greening plants, building walls with the help of green plants can not only improve the ecological environment, but also reduce the temperature in the building in summer, reducing the energy consumption of air conditioning; with the help of new building materials with outstanding thermal insulation effect, such as the current popular use of porous bricks, is conducive to indoor winter thermal insulation, can reduce indoor heating station. The resulting energy consumption. Building energy consumption can also rely on renewable energy such as solar energy, wind energy, which is also conducive to the realization of environmental protection and rational use of resources. Because of the progress of construction technology, many new construction techniques have been produced in construction engineering. The application of new technology can not only improve the construction quality, but also ensure the construction efficiency. In addition, it can also reduce the impact of construction on the environment, which is conducive to solving the environmental pollution problems caused by construction and reducing the energy consumption in construction.

4.3 We should pay attention to the utilization of renewable resources.

At present, great changes have taken place in the way of social development, and more attention has been paid to energy conservation and environmental protection. Therefore, building design needs to change the original way and have higher standards. The function of building should not only achieve comfort, but also ensure health. Therefore, building design should strengthen the relevant content of energy conservation and environmental protection, and achieve energy conservation and environmental protection of buildings by means of targeted design. In view of the problem of energy saving and environmental protection, building design should analyze the constraints of energy saving and environmental protection, pay attention to environmental protection in the design, and realize the efficient use of various resources. The reasonable selection of materials should be considered in the design. Therefore, building design needs to take into account many aspects of content, in order to achieve building energy saving while ensuring that the environment is not affected. At present, industrial and domestic waste also affects the environment, which includes a large number of construction waste. The sustained growth of construction waste not only leads to the decline of resource utilization, but also causes serious environmental problems, affecting sustainable development. For example, cement commonly used in building materials, China's production and consumption continue to increase, the existence of this situation will lead to huge consumption of resources, and because it is difficult to reuse, environmental problems become increasingly prominent. In order to eliminate the drawbacks of traditional cement, due to technological progress, a variety of new environmental protection building materials have been produced, such as recyclable concrete, but the consumption of such building materials is relatively low, the impact of such products on the environment is relatively low, but the market promotion of new building materials is slow, so it is necessary to strengthen the promotion.

4.4 We should use high and new technology to promote green construction.

Civil buildings and construction projects need to function for a long time after they are built. Natural damage will occur during this period, which will lead to functional degradation gradually. In addition, the durability of materials will change with time. If the bearing capacity is seriously weakened, the safety of the project will be difficult to guarantee, and the serious situation will lead to casualties and property losses. Therefore, it is very important to monitor the stability of existing civil engineering and construction projects. With the help of detection, changes in buildings can be detected in time, and timely repair and reinforcement measures can avoid the occurrence of Engineering accidents, which will play a driving role in ensuring personal safety and property safety.

The application of new technologies can also promote sustainable development. For example, the use of signal analysis and processing technology can monitor the structural status of buildings, which plays a role in promoting the safety of civil engineering and construction projects. Due to the progress of technology, the current structure monitoring technology plays a dynamic monitoring role, which can monitor the structural changes in time, and the processing of various types of data can be automated. In the specific application, sensors with various functions are placed in the relevant parts of the building structure, and the stability of the building structure is evaluated by data analysis. The durability of many projects can be guaranteed by means of structural monitoring technology. If there are unsafe factors in civil engineering and construction engineering, and structural monitoring technology can send out early warning signals in time for such problems, and the potential safety hazards can be eliminated in time to control the occurrence of building safety accidents. For the economic use of buildings, it can prolong the reliable use time of buildings and help to achieve sustainable development.

4.5 We should establish a complete set of laws and regulations and management system.

In the development of today's society, the restraint of environmental protection behavior also needs to rely on sound system. The green construction also needs the government to promulgate perfect laws and regulations, and the sustainable development of the construction industry needs a scientific and reasonable development plan. The establishment of supporting laws and regulations and management system is the basis to ensure the quality of development. Regulation and management system can play a role in promoting the development of institutionalization. In addition, in view of the construction management, it is necessary to have matching green construction measures and coordinate the relevant elements in the development. Specific projects in civil engineering and construction engineering should also strengthen the management of design. In the specific design scheme, we should integrate energy saving and environmental protection into the specific design content and choose reasonable construction scheme, so as to ensure energy saving and environmental protection from the design source, realize the rational use of various materials, eliminate the waste of materials in construction, reduce the energy consumption in building use, and create conditions for improving the energy saving and environmental protection effect of buildings.

5. Conclusion

Green construction of civil engineering requires long-term planning. We should pay attention to the environmental protection in the construction of civil engineering and building engineering, and take necessary measures to reduce the damage to the environment in the construction process. The key to sustainable development lies in not having an impact on the environment and having a long-term plan for the use of resources. We should master the relevant methods of energy-saving and environmental protection design to realize the harmonious coexistence of people, environment and buildings. In the design of buildings, we should embody the ecological characteristics, ensure the use of various resources, especially to control the impact of housing on the environment. We should solve the problem of energy saving and environmental protection while improving the safety, comfort and health of buildings. As current builders, we must solve the environmental problems and

resource utilization problems arising from traditional construction methods. Civil engineering and construction engineering should be combined with sustainable development, we should vigorously promote green building.

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