Analysis on Water Conservancy Project Construction Technology and Management

Qin LU

Yangling Vocational & Technical College, Xianyang, Shaanxi, China

lu3bwen2cd@163.com

Keywords: Water conservancy project, Construction technology, Technical management, Effective measures

Abstract: Water conservancy projects are closely related to our life. The water, electricity, industrial water, agricultural irrigation and so on commonly used in our life are all realized through water conservancy projects, which shows the importance of water conservancy projects. However, due to the much professional knowledge involved in the water conservancy construction technology, there are still many problems to be solved in the current water conservancy project construction. Starting from the significance analysis of water conservancy project construction technology and management, this paper analyzes the existing problems in water conservancy project construction technology and management, and formulates effective measures to improve the construction technology and management level of water conservancy projects, so as to improve the quality of water conservancy projects in China.

1. Introduction

Water conservancy projects have a direct and important impact on people's daily life. Therefore, it is necessary to strengthen the importance of water conservancy projects and ensure the construction quality of water conservancy projects. Only in this way can we guarantee the safety of the people's lives, build a harmonious socialist country, and enhance the social and economic development level of our country. At present, China's water conservancy projects appear in different types, and the supporting small water conservancy facilities are also increasing, which makes the construction units undertake heavy construction tasks and opens up the construction market of construction units. However, when the water conservancy project construction units face new development opportunities, they also meet more difficult problems and challenges. In order to ensure the healthy development of water conservancy project construction units in the market competition, it is necessary to strengthen the technology and management of water conservancy project construction to bring more economic benefits for the enterprises.

2. Analysis on Significance of Construction Technology and Management of Water Conservancy Projects

2.1 The Research on the Construction Technology of Water Conservancy Projects is Helpful to Realize the Overall Planning of Resources

In order to effectively combine the theoretical knowledge and practical operation, it is necessary to have a certain amount of funds and advanced technology as a guarantee. If the construction technology of water conservancy project is not effectively managed, it will lead to the whole water conservancy project can't be carried out smoothly, resulting in problems such as lacking strict discipline and reasonable command mode. Therefore, it is urgent to strengthen the research on the construction technology and management of water conservancy projects, carry out effective overall planning of water resources and various construction facilities to realize the effective operation of water conservancy projects and ensure the continuous development of water conservancy engineering industry.

  DOI: 10.25236/iccemm.2021.014

2.2 The Effective Implementation of Water Conservancy Project Construction Technology Has a Direct Impact on Its Operation Resource Supply

In the process of water conservancy project construction, to ensure the effective implementation and development of water conservancy construction industry, it is necessary to combine technology and theory, and ensure the overall implementation of construction technology[1]. Therefore, effective water conservancy project construction technology management has a direct role in promoting the impact and benefits of water conservancy projects. The key point of water conservancy project construction is to effectively manage the construction technology of water conservancy projects. Therefore, only when the water conservancy project construction technology management is fully implemented, can the construction technology be effectively applied in the construction process of water conservancy projects, so as to achieve the expected construction benefit of the water conservancy projects.

3. Analysis on Existing Problems in Water Conservancy Project Construction Technology and Management

3.1 Imperfect Current Construction System

At present, most of the water conservancy project construction units have some deficiencies in management, such as the enterprise's own insufficient development, imperfect construction quality control mechanism, and imperfect technical personnel management system. Due to the imperfection of the construction system, coupled with the relatively backward construction technology and equipment, the construction quality of water conservancy projects is reduced.

3.2 Insufficient Management and Lack of Standardization in the Construction Process

Because the construction units are not strict in management, the quality control is not strict in the construction process of water conservancy projects, and the inspection requirements of engineering quality are not strict enough, so the construction quality of water conservancy projects is low. The first is that the design and construction of water conservancy projects have not been carried out according to the national standards for water conservancy construction, and the specified flood control standards have not been met, resulting in inestimable flood disasters in the rainy season. The second is that in the construction of dam foundation and dam body, the required materials are not strictly selected according to the provisions, and the substandard materials are used for construction. In addition, there is no strict control of the construction procedures, resulting in leakage and seepage damage of the dam foundation and dam body, so that the water conservancy project can't play its effective role.

3.3 Not Advanced Technical Level

The technical theory level of water conservancy project construction in China is relatively backward, which is mainly reflected in the professionalism of technical management and management loopholes. First of all, technical management is highly professional. The technical management of water conservancy project construction involves much professional knowledge, and there are many influencing factors. The characteristics of large amount of knowledge, wide range and strong professionalism are very prominent. However, the staff in charge of technical management have low educational background and low comprehensive quality, so they can't make effective overall planning in the face of complex construction environment and many personnel management problems. Once there is serious conflict and contradiction of interest, it will affect the whole project [2]. Second, there are many management loopholes. The frequent occurrence of reservoir washout and dam collapse is mainly caused by many management loopholes in the construction and maintenance of water conservancy projects. Construction technical management

personnel also lack supervision and management on technical control and design repair, and do not pay attention to construction technology management.

4. Effective Measures to Improve Construction Technology and Management of Water Conservancy Projects

4.1 Speed Up the Establishment and Improvement of Construction Technology Management System

In the construction of water conservancy projects, in order to improve the management level of water conservancy project construction, the first step is to improve the construction technology management system. Only in this way can we ensure the effective improvement of management level. First of all, make clear job responsibilities for each job. To make clear responsibilities of each construction personnel, it is necessary to implement the rules and regulations of allocating responsibility to individual, strengthen the mutual communication and cooperation consciousness between the management, technical and construction personnel, and promote an effective mutual supervision system between each department and each employee. Secondly, it is necessary to ensure that the construction plan is scientific, detailed and reasonable [3]. Before the construction of the project, the management department should communicate and negotiate with the relevant technical personnel and construction personnel for the possible problems and dangers in the construction process, and issue effective solutions. After the detailed investigation of the construction site, the detailed construction plan should be written to ensure its scientificity. The technical operation process of each construction link and the places prone to problems should be accurately listed to provide effective reference for technical personnel. Finally, establish supervision and management department. In order to strengthen the management of construction technology and ensure the construction quality, it is necessary to set up the supervision and management department to make the construction personnel carry out the standardized operation, urge them to carry out the construction effectively in strict accordance with the national standards and construction plan, and also formulate a scientific reward and punishment system to effectively punish the personnel who violate the system. In addition, the supervision department should adjust the deficiencies of the construction plan according to the specific construction situation after the on-site investigation.

4.2 Strictly Follow and Carry out the Rules and Regulations, Strengthen the Technical Management

To abide by the rules and regulations and strictly implement them according to the requirements is the key to strengthen the technical management, and is also an important basis to ensure the scientific and reasonable organization of various technical work. To strengthen the technical management work, we can take actions mainly from three aspects to improve. First, in the early stage of water conservancy project construction, the technical management of preparation work is mainly for the management of construction quality, safety and progress, which is an important link to ensure that the project can be completed on time and completed with quality and quantity. The second is the technical management in the construction process, mainly focusing on the production factors invested in the construction process and the specific implementation status and results of the construction operation. Finally, the technical management after completing the water conservancy project mainly refers to the technical management for the quality acceptance and testing of the completed projects. It can be seen that the construction technology management is a long-term management task, and strict technical management should be implemented from the preliminary preparation to the final completion. Therefore, it is necessary to implement the construction of technical management system as soon as possible, so as to promote the personnel at all levels of construction to play the greatest role. First, the rules and regulations formulated by the managers should not only meet the requirements and standards of the state and relevant departments, but also

meet the development characteristics of their own enterprises. Through continuous improvement, the most scientific and reasonable technical management regulations can be formulated, and the regulations can be adjusted continuously and implemented in each department of the enterprise in the actual construction process. Second, because the technical management is a long-term work, so it is necessary to establish a targeted detection system, summarize and evaluate the construction projects in time to ensure the sustainable development of the technical management of water conservancy projects. Third, it is necessary to effectively combine economic and administrative means to foster the enthusiasm of technical personnel.

4.3 Improve the Comprehensive Quality of Technical Personnel

First of all, it is necessary to carry out regular technical training for the technical personnel of water conservancy projects, organize the technical personnel to strengthen the study of professional knowledge to enhance their actual operation ability. In addition, we should carry out legal education, ideological and moral education for relevant technical personnel to ensure that the comprehensive quality of technical personnel is improved. Secondly, effective incentive policies should be formulated to improve the staff's independent participation. For the employees who perform well or make contributions to the enterprise, certain rewards should be given, and corresponding punishment should be given to the employees who have misoperation. Finally, in order to strengthen employee's sense of competition and improve their quality, managers can reduce the staff who are not competent for the job requirements.

5. Conclusion

To sum up, water conservancy project construction is closely related to people's life, which can provide important guarantee for industrial water, electricity, agricultural irrigation and daily life. At the same time, it is constantly affected by human factors and the environment, which not only affects people's daily life, but also is not conducive to the orderly construction of water conservancy projects. Therefore, all departments should strengthen the management of construction technology of water conservancy projects, establish and perfect management regulations to ensure the smooth progress of the construction projects.

6. Acknowledgment

Fund projects: Yang Ling Vocational and Technical College, "Ph.D. and Senior Vocational Students" studio construction project,Number:BG202002."The Study of Technical Measures to Prevent Collapse in The Construction of The Tunnel in The Bad Geological Section"

References

[1] Wang Chunyan. Analysis on Water Conservancy Construction Technology and Management. Jiangxi Building Materials, no.11, pp.137-138, 2020.

[2] Yue Yibo. Analysis and Exploration of Water Conservancy Engineering Quality Control. Technology and Economic Guide, vol.28, no.23, pp.47+46, 2020.

[3] Tian Feifei, Zhong Xiaoyan, Tian Xiang. Analysis and Research on Innovation of Water Conservancy Project Management System Mode [A]. Chinese Research Committee of Smart Engineering and Association of Intelligent Learning and Innovation. Collection of 2020 Wanzhi Scientific Development Forum Essays (smart engineering II) [C]. Chinese Research Committee of Smart Engineering and Association of Intelligent Learning and Innovation, no.7, 2020.