

Discussion on Construction Technology of Water Conservancy Project

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Abstract: In recent years, the relationship between human society and the natural environment has become more and more tense, and the relative shortage of water resources has also had a serious impact on social and economic development. In order to ensure the continuous development of water conservancy project, first of all, it is necessary to improve the quality of water conservancy project design, which needs to analyze the problems existing in water conservancy project design at the present stage, and constantly improve and perfect the problem, so that the quality of water conservancy project design can be improved continuously.

Keywords: hydraulic engineering; engineering design; existing problems; improvement measures

1 preface

Water conservancy projects are basic projects, which are related to people's livelihood, so we must ensure the quality of water conservancy projects. Improving the design quality of water conservancy projects is an effective way to improve the quality of water conservancy projects, which has different effects on the progress, construction period, project cost and the realization of the function after the completion of the project. Therefore, it is necessary to analyze the problems existing in the design of water conservancy projects, and constantly innovate and improve in practice to better guide the development of the project.

2 There are the main problems existing in the construction technology of water conservancy projects

2.1 Construction operation is not standard

Because the development of water conservancy engineering technology in China is not mature, there is no corresponding clear regulation to regulate the whole water conservancy engineering industry. Without a standard construction process, the operation of water conservancy engineering construction technology is not standard [1]. However, the degree of construction directly affects the construction quality of the whole water conservancy project, so the construction operation is not standard is also the main reason for the low quality of the water conservancy project.

2.2 Improper maintenance of water conservancy projects

Because the water conservancy project generally faces a more complex environment, and the construction difficulty is relatively high, so the later maintenance of the project is very important. Because in the process of construction due to the shock impact and other reasons, after the construction will be exposed to a variety of problems. If the water conservancy project is completed, do not pay attention to the maintenance and inspection of water conservancy projects, it is easy to cause cracks and water seepage and other problems. These serious problems will lead to the paralysis of the entire water conservancy project [2]. Therefore, the maintenance of water conservancy projects is of great significance.

2.3 The quality of the water conservancy project construction team is not high

Water conservancy project is a major with a wide range of knowledge, which requires practitioners to have a more comprehensive knowledge and requires a relatively high skill requirement of personnel. But the general water conservancy project only engineering designers are more professional, most of the real construction personnel do not have good professional skills and knowledge, so many times can not well understand the design intention of designers, also can not fully play the design effect in the construction [3]. Then, the quality of the water conservancy engineering construction team is also an important factor affecting the construction technology of the water conservancy engineering.

2.4 Water conservancy project construction technology and safety are low

The construction of water conservancy projects is mostly carried out in the places where the environment is relatively severe, and the constant brought by the construction environment causes great obstacles to the construction of water conservancy projects. Due to the severe environment, it will naturally bring safety risks. Because water conservancy projects are outdoor operations, water conservancy projects are also easily affected by the environment [4]. There are many potential safety risks, resulting in fewer employees, and it is difficult to cultivate talents with higher professional skills in water conservancy engineering. The low safety performance of water conservancy project construction will bring many adverse effects to the whole industry of water conservancy project.

3 Improvement measures for water conservancy project design

3.1 Improve the professional quality of design personnel, improve the proportion of professional and technical personnel

In order to continuously improve the quality of water conservancy engineering design, it is necessary for water conservancy engineering design units to actively introduce professional design personnel with high quality, and regularly carry out relevant training, improve professional quality and design level, so as to effectively ensure the quality of water conservancy engineering design [5]. At the same time also improve the proportion of expertise in water conservancy engineering units, is the China water conservancy engineering design staff accounted for the proportion of the number of people in water conservancy industry, high professional design personnel of the overall number is less than half, has a higher level of business number of design personnel generally only 3~5 people, this has not with the increasing number of water conservancy projects in recent years to maintain a certain proportion. The heavy design task and the huge engineering investment increase the work pressure of the designers, and the number of personnel is insufficient, which leads to some problems in the engineering design. Therefore, it is necessary for the water conservancy engineering unit to optimize the structure of the design department, and constantly improve the design level of technical personnel.

In the necessary links of engineering design, more experienced experts can be hired as consultants and guidance, so as to ensure the quality of the project.

3.2 Strengthen the quality management of water conservancy project design

In order to ensure the quality and function of water conservancy projects, it is necessary to continuously improve the level of engineering design and ensure the scientific rationality of engineering design. This requires not only to standard the size and specifications of each construction details in the design drawings, but also to ensure the correctness of the annotation. In the process of engineering design, avoid the use of some vague words, and ensure the reliability and accuracy of the materials and equipment data provided by the construction staff, the purchasing personnel and the supervision and management personnel [6]. Designers should also establish quality awareness, to reflect this concept in the design of water conservancy projects, so that in the construction of specific water conservancy projects, you can accurately control the quality of engineering materials and the equipment required in the project, so as to ensure the quality of water conservancy projects.

3.3 Add the technical and economic concept to the water conservancy project design

Before the design of water conservancy project, the relevant design department staff to the site, the climate characteristics of the project construction site, the hydrological environment, according to the relevant data, analyze the design, can modify the actual environment, and can control the cost and quality, while ensuring the economic principles, the project cost control in the minimum scope.

3.4 Effectively identify potential security risks

In all outdoor construction projects, the construction site will set up a large safety warning board, usually written with the words "safety first", which shows that safety is very important in outdoor operations. However, water conservancy project construction belongs to a high-risk industry, so improving the safety of the industry is the constant goal of water conservancy project construction industry. In order to

effectively reduce the security risks, we must first do the security risks for screening [7]. Especially before the construction and in the construction process, these two periods are the high incidence of accidents. Before the construction, it is necessary to check whether the construction environment is safe, whether there is a karst cave underground, and whether there is the possibility of sudden debris flow in the construction process, etc. In the process of construction, we should pay attention to the cultivation of safety awareness of construction personnel, but also need to have a formed construction safety process, especially in the operation of blasting, drilling and other high-risk technology, we should pay more attention to the protective measures before construction [8]. The safety investigation of the construction, and the safety awareness of the construction personnel are the effective ways to reduce the potential safety risks.

3.5 Make early plans for emergency situations

In the construction process of water conservancy projects, there are often emergencies, such as surface collapse, debris flow, karst caves and other emergencies. The occurrence of such emergency may often lead to the paralysis of water conservancy construction projects, and may even endanger the life safety of construction personnel. Therefore, it is necessary to predict the possible unexpected situation, and make the corresponding countermeasures. Due to the large number of emergencies, it is necessary to make a detailed classification of the types and degrees of emergencies, and make different response measures according to the classification. For serious emergency situation, red alert, moderate emergency situation with orange alert, and low emergency situation with yellow alert [9]. According to the different warning, make the corresponding treatment. This can greatly reduce the harm caused by an emergency and ensure the safety of construction projects and personnel.

3.6 Pay attention to the maintenance link of water conservancy projects

The maintenance of water conservancy project plays a very important role in the whole project of water conservancy project. The maintenance of the water conservancy project needs to run through the whole water conservancy project construction project, which needs to penetrate in every link of [10]. Because water conservancy projects take a long time, we need to pay attention to the maintenance of construction materials in the early stage. In the construction process, it is also necessary to maintain and maintain the built part from time to time. Reduce the problem of rework due to improper maintenance in the construction process, which will greatly improve the work efficiency of the construction technology of water conservancy projects. Last but not least, the maintenance of the water conservancy construction project [11]. Due to the poor construction environment, the environmental problems will be exposed after the construction, such as engineering cracks, wall water seepage and other problems. Timely and effective maintenance can greatly reduce the quality impact of other problems to the construction projects of water conservancy projects, and effectively ensure the completion of water conservancy projects.

4 Epilogue

There is still a long way to go for the water conservancy industry in China. The management and construction departments need to work together to supervise the construction process of water conservancy projects and the development of construction technology of water conservancy projects. Safety hidden dangers should also be paid attention to, before construction, construction, after construction should try to investigate, to avoid the problems caused by safety hidden dangers, and then resulting in the quality of the whole water conservancy project construction project is not high. The construction technology of water conservancy projects also needs to be developed to create the construction technology of water conservancy projects in line with China's national conditions. This paper discusses the problem of the construction technology of water conservancy project, and puts forward the corresponding views and the corresponding measures to solve the problem. It

enriches this kind of literature and provides a reference for the future construction technology of water conservancy projects. Hope to give the future water conservancy project construction technology some warning, promote the development of water conservancy project construction technology.

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