



## REVIEW

# Analysis of Effective Optimization Methods for Building Construction Technology Management

Zongbing Lu\*

Nantong Xinhua Construction Group Co., Ltd., Nantong, Jiangsu, 226333, China

### ARTICLE INFO

#### Article history

Received: 16 July 2019

Revised: 19 July 2019

Accepted: 24 July 2019

Published Online: 31 July 2019

#### Keywords:

Construction engineering

Construction technology management

Optimization methods

### ABSTRACT

During the construction process of the construction project, the construction technology management work can improve the overall quality of the project construction. In the context of increasingly fierce competition in the construction market, construction enterprises should strengthen the management of construction technology, enhance their technical level and market competitiveness, and promote the development of the construction market[1]. The paper mainly analyzes the optimization methods of building construction technology management.

## 1. Introduction

In the rapid development of social economy, China's construction industry is developing very rapidly, the scale of construction engineering is expanding, and people are paying more and more attention to construction technology problems. The management level of construction engineering is closely related to the overall quality of engineering construction. Relevant departments need to analyze the construction site management methods and optimization measures in depth, and improve the construction quality of construction projects<sup>[1]</sup>. Based on this, the article expounds the basic contents of building construction technology management, introduces the importance of building construction technology management optimization, analyzes the problems existing in building construction technology management, and summarizes the

corresponding optimization measures.

## 2. Basic Contents of Building Construction Technology Management

In the rapid development of social economy, there are more and more types of buildings in China, the structure of buildings is more complicated, and the planning of construction projects is more and more novel, which largely meets the work and life needs of people. At this stage, China has increased capital investment in infrastructure construction. The construction industry has gradually developed into one of the pillar industries for social and economic development. It plays an important role in the development of the national economy and is a key component in the development of modern society. In the development of modern society, the Chinese construction market is increasingly chaotic, the market competition in the construction industry

\*Corresponding Author:

Zongbing Lu,

Nantong Xinhua Construction Group Co., Ltd., No. 34 Xinjin Road, Tongzhou District, Nantong, Jiangsu, 226333, China;

E-mail: 13910936665@126.com.

is becoming fiercer, and construction enterprises should do a good job in construction technology management, so as to improve the overall quality of engineering construction and create more economic benefits<sup>[2]</sup>. At the same time, construction enterprises also need to introduce more advanced construction techniques and management methods, increase the training of talents, improve the problems in the operation of construction enterprises, and enhance the market competitiveness of enterprises. The construction of construction projects is characterized by complexity, there will be investment in construction costs in each construction link, and the links between the various construction links are very close. Enterprises should strengthen the management of the whole process of construction, avoid unnecessary economic losses, and establish a good corporate image. At the same time, in the construction process of construction projects, construction enterprises should strengthen the management of construction engineering construction technology, introduce more advanced technologies, and establish a sound management system to support the overall quality and safety of construction projects.

### **3. The Importance of Effective Optimization of Building Construction Technology Management**

#### **3.1 Improve the Construction Quality of Construction Projects**

In the project construction process of the construction projects, in order to improve the quality of the project construction, relevant departments need to introduce advanced construction technology. Construction engineering is technically intensive, which requires the introduction of more excellent construction techniques as support. In the process of building material selection, construction technology and construction technology application, enterprises need to arrange professional management personnel to guide the construction project to ensure the effectiveness of construction projects and improve the overall quality of construction projects. Therefore, in the construction process of construction projects, construction enterprises must introduce advanced construction techniques, in order to create more high-quality projects and provide technical support for the effective implementation of project construction.

#### **3.2 Effectively Control Building Construction Costs**

Construction projects are relatively large in scale, and a large amount of capital is required in the actual construction process. Therefore, in the construction process

of construction projects, in order to create more benefits, relevant departments need to strengthen the control of construction costs, and introduce more advanced and scientific construction technology, reasonably select and plan construction materials, construction process, minimize the cost of all aspects of construction, and obtain more benefits<sup>[3]</sup>. In addition, the effective implementation of construction engineering construction technology management can reduce the problem of resource waste, achieve the expected construction effect, and realize the full utilization of human, material and financial resources, which creates more economic benefits for construction enterprises and enhances the comprehensive competitiveness of construction enterprises.

### **4. Existing Problems in Building Construction Technology Management**

At this stage, in the construction process of China, the level of construction technology management needs to be improved, and there are still a series of problems that need to be addressed, which requires relevant management personnel to thoroughly analyze the construction technology management issues summarized in the construction process. In this way, the construction enterprise can formulate corresponding solutions to improve the management level of construction technology. At present, the problems in the construction technology management are mainly reflected in the following aspects.

#### **4.1 Construction Technology Management System Needs to Be Perfected**

The perfection of the construction technology management system directly affects the overall effect of construction technology management. However, in the development of modern society, the construction technology management system of Chinese construction enterprises is still not perfect, which makes the construction enterprises lack information exchange and communication, material management work is not in place, and construction resource management is not enough. At present, the inadequate construction technology management system has become a key issue in the development of construction enterprises. Relevant departments need to take reasonable measures to effectively improve the construction technology management level of enterprises and create more benefits for construction enterprises.

#### **4.2 There Are Defects in the Theory of Building Construction Technology System**

In the rapid development of society, many construction

enterprises have begun to recognize the importance of the construction technology system, however, affected by the factors such as the technology, scale and total amount of construction enterprises, only large-scale enterprises can formulate construction technology solutions, while small-scale construction enterprises still have certain gaps in the process of implementing construction technology management system, which has brought many technical problems for the construction of construction projects. For example, the allocation of human resources management is relatively confusing, the technical talents are insufficient, the work of the posts and the staff are out of line, and the construction enterprises have not subdivided the various technical departments and cannot be improved according to the rules and regulations, which makes many positions unable to make up for technical vacancies<sup>[4]</sup>. In addition, the relevant departments have not been managed in accordance with relevant rules and regulations. In the process of personnel management and guidance, the overall quality and safety awareness of the staff are relatively weak, and there is a lack of attention to relevant systems, in the actual construction process, the employees did not follow the relevant procedures, and often operated in their own way, which adversely affected the overall quality of construction projects.

#### 4.3 Construction Site Supervision Is Not in Place

Construction project management is a labor-intensive job that requires a large amount of labor, making the degree of education of practitioners very different, and it brings certain difficulties to the management and control of operators, which has led to a series of problems at the construction site, such as the construction machinery and equipment, the random placement of materials, the lack of rationality in the operation and planning of the construction site, and the failure to operate in accordance with relevant standards and rules and regulations<sup>[5]</sup>. Moreover, the combination of construction workers is unreasonable, and there is a lack of strict discipline between various construction workers as a constraint, and the spirit of solidarity and cooperation is lacking, which seriously hinders the effective implementation of construction projects.

#### 4.4 Strengthen the Control of Construction Quality of Construction Projects

There are many construction engineering operation procedures and a wide range of professional knowledge, which brings certain difficulties to the construction control and comprehensive inspection work, such as the phenomenon of quality problems missing during the sampling inspec-

tion. Moreover, during the construction of the construction project site, the relevant departments did not comprehensively control the actual construction, such as whether the construction meets the quality standards, the rework and repair losses caused by the unqualified items, and the costs not increased for the prevention and control, which has caused unnecessary cost investment in the project construction.

### 5. Effective Optimization Methods for Building Construction Technology Management

#### 5.1 Optimization for Management Organization of Building Construction Technology

There are big differences in the levels of general contracting units and subcontracting units in large-scale construction projects, in the process of establishing the construction management technology management organization system, relevant personnel need to pay attention to the differences between the hardware and software equipment of each contractor, and provide guarantee for the rationality of the operation of the construction technology management organization system<sup>[6]</sup>. At the same time, the general contractor, subcontractors, contractors, etc. can not only manage according to the contract, but also need to integrate the construction technology management organization system into the on-site management process, and in the process of subcontracting, the technical management work needs to be completed and the professionals are responsible. In the whole process of building construction, construction units shall strengthen coordination and cooperation with various units, strengthen the management of on-site personnel, do a good job in personnel reserve, training and management, improve the overall quality and professional level of construction site personnel, and enhance the safety awareness of construction workers.

#### 5.2 Formulate Construction Technology Management System

In the development of the construction industry, relevant departments need to establish a sound construction management system, and implement the various rules and regulations in the system into actual work. Construction enterprises need to establish professional management departments, strengthen the management of the whole process of on-site construction, and achieve the expected goals of the technical management system. In order to achieve the expected goals of construction project construction, construction enterprises need to continuously improve, so as to improve the overall quality of construc-

tion projects and promote the further development of the construction industry<sup>[7]</sup>. In the process of construction technology management of construction projects, in order to implement the management system and system into practice, the general subcontracting enterprise management should constrain and manage the contracted enterprise, clarify its own job responsibilities, reasonably arrange the design planners to design the project, and implement the contents of the plan. In the construction process of a construction project, when unreasonable problems are found, it is necessary to adjust in time according to the actual conditions of the project construction to reduce unnecessary cost investment. In addition, after the completion of the project, it is necessary to carry out a final inspection, and the project is completed after meeting the relevant national technical standards.

### 5.3 Strengthen the Management of Construction Technology Implementation

In the whole process of construction, the construction enterprise needs to clarify the duties and responsibilities of the management personnel of each construction link, and implement all the work to individuals and departments, and strictly require the construction personnel to carry out construction according to the construction standards and relevant specifications. It is strictly forbidden to operate in violation of regulations, and in case of violations, it needs to be resolved in a timely manner. In addition, the construction enterprises need to strengthen the emphasis on the construction progress of the construction project, rationally allocate the construction resources according to the various influencing factors in the construction process, provide support for the effective implementation of the construction of the project, and complete the construction operations on time according to the specified construction period, so as to continuously improve the construction quality of construction projects and create more benefits for construction enterprises<sup>[8]</sup>.

## 6. Conclusion

In summary, in the rapid development of social economy, the scale of construction of China's construction proj-

ects is constantly expanding, and all levels of society put forward more stringent requirements on the construction quality of construction projects, which makes the importance of building construction technology increasingly prominent<sup>[5]</sup>. However, at this stage, there are still a series of problems in the construction technology management, which affects the construction quality of the construction project, which requires the construction units to take corresponding optimization measures to optimize the construction technology management methods.

## References

- [1] Jianyao Shao, Yi Yang. Analysis of effective optimization methods for building construction technology management[J]. Construction Materials & Decoration, 2018(38):137-138. (in Chinese)
- [2] Maoyao Li. On the effective optimization method of building construction technology management[J]. Times Agricultural Machinery, 2018, 45(05):114. (in Chinese)
- [3] Rui Li. Research on effective optimization method of construction technology management[J]. Sichuan Cement, 2018(02):178. (in Chinese)
- [4] Xingbo Huang. Strategy and analysis of construction technology management level improvement in construction engineering[J]. Construction & Design for Project, 2016(7X). (in Chinese)
- [5] Wanhong Lin. On the method of optimization of building construction technology management[J]. Jiangxi Building Materials, 2017(01):259. (in Chinese)
- [6] Peng Gong. Analysis of methods of effectively improving the construction technique management level in constructional engineering[J]. Chinese and Overseas Architecture, 2019(04):187-189. (in Chinese)
- [7] Xiuying Huang. Analysis of methods of effectively optimizing the construction technology management[J]. Jiangxi Building Materials, 2017(02):293+300. (in Chinese)
- [8] Xueying Han. Analysis of effective measures of improving optimization management of building construction technology[J]. Technology Innovation and Application, 2015(11):245. (in Chinese)