

Research on problems and solutions in construction quality supervision of construction projects

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Abstract: With the rapid development of economic development in China, the urban construction is gradually deepening. The scale and scope of the construction project are getting larger and larger, and the engineering management is faced with many challenges. At present, many construction enterprises have some problems in the management of construction projects. In order to improve the quality management level, the whole process of supervision and management must be done. Take effective measures to solve the problems existing in the construction and ensure the smooth completion of the whole project construction. This paper analyzes the existing problems of construction quality supervision and management, and puts forward some concrete measures. It is hoped that the level of industry supervision and management can be improved to ensure the realization of the quality objectives of the project^[1].

Keywords: Construction engineering; quality management; quality supervision; supervision problems

1. Introduction

Construction engineering is an important infrastructure for people's livelihood and economic development, and has been widely concerned since the early stage of construction. With the improvement of people's living standard, the quality of construction project is getting higher and higher. The effect of project supervision and management is related to the overall safety and functional performance of the project. Without supervision and management, all kinds of quality problems can be caused. The factors that cause various problems are management personnel, management system, material equipment and so on. The construction unit and the project supervision and administration department should give full play to their supervisory duties. In particular, the quality supervision and administration department should supervise the works effectively according to industry standards and laws and regulations, and improve the construction level of construction projects through various efforts.

2. Overview of construction project quality management

The quality supervision and management of construction project is the basic guarantee for the smooth completion of project construction. At the same time, it is related to the economic benefit of the enterprise, the corporate reputation and even the future development direction of the enterprise. In the fierce market environment, a high-quality engineering project is the symbol and embodiment of the strength of the enterprise. Good engineering quality can obtain the recognition and attention from all walks of life, and more space for the enterprise to receive goods. In addition, with the rapid development of science and technology, the quality of construction projects is closely related to the social and economic development and the safety of people's life and property. The project quality supervision can strengthen the

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communication and communication between the participating parties of the project. Implement scientific and reasonable adjustment of the project strictly according to the planning objectives and design requirements, and reduce the possibility of accidents at the construction site. Quality supervision and management is mainly to optimize engineering quality and is an important part of construction management. Improving the quality supervision level of construction projects can ensure the comprehensive realization of the functional effect of the building and enhance the image and competitiveness of the enterprise. It is of great significance to the smooth implementation of the construction project, and it is an important force to promote the rapid development of modern construction industry^[1].

3. Problems in quality supervision of construction engineering

3.1 Lack of quality supervision and management mechanism

In the new era economy, people's residential and commercial shopping requirements have improved, and the construction industry is rapidly developing. With the transformation of building function and diversification, the construction unit is gradually reforming and innovating the construction technology and building structure in order to meet the current social development. This not only increases the difficulty of building construction, but also increases the quality of some projects due to tight construction period and heavy tasks. The construction enterprises will focus on the quality inspection after completion. Poor understanding of quality and safety management before and during construction. Although some construction enterprises have established corresponding management system, but without high-quality management personnel, the quality supervision system is not in place. In the process of implementation, it is influenced by various factors and the system is overly superficial. The construction quality supervision and management work is only to meet the acceptance criteria, ignoring the important role of quality supervision and management.

3.2 Supervision staff quality is low

As the third party supervision and management organization of construction site, the supervision unit has an important responsibility for the realization of the quality goal of the construction project. The supervision work of the supervision unit is more detailed and comprehensive, and the quality of the project is guaranteed. In the process of supervision, the construction unit of construction technology, construction materials, construction cost, construction personnel, quality, progress and so on many aspects of scientific supervision and management work, to the smooth completion of the construction project has played an important role. However, some supervising units and supervising staffs are too formal in design and have not played the proper supervision effect. Supervisory personnel's technical level and comprehensive quality level can not meet the on-site quality supervision requirements^[2].

3.3 Unqualified construction materials

Construction material is the key factor that affects the quality of project, and also is the key content of quality supervision and management. The quality of construction materials has a direct impact on the overall quality of construction projects. In the actual construction, some enterprises, in order to obtain more economic benefits, have the behaviors such as shoddy and shoddy, which seriously threaten the quality and safety of the project. In addition, there are many kinds of materials used in building construction. Although the construction materials have been effectively supervised and managed, they have not been used in accordance with the relevant standards and technical standards, and the material testing technology has not been adopted. This will also cause the problems of material quality. The project manager must reasonably arrange the allocation of material resources. The quality and safety of the construction project will be affected by the failure of the construction enterprise to carry out reasonable supervision, which leads to the poor management of the site and the lack of safekeeping and use of the materials.

3.4 The staff comprehensive quality is not high

As the important executor of the construction supervision and management, the management personnel have a

great influence on the development of management work. At present, many construction project management personnel are selected from the grass-roots work positions or are recruited from outside. These managers are not rich in technical ability and professional knowledge, lack sufficient experience level, and reduce overall management level in quality supervision. In addition, besides the management personnel, the site construction personnel is also the important part of quality supervision. The technical level and operation behavior of the construction personnel have a direct impact on the engineering quality. In order to reduce labor cost, some construction enterprises choose construction personnel with low quality and poor technique. Due to the lack of professional knowledge, the construction can not be carried out according to the operation process, which leads to the serious deterioration of the quality phenomenon, which also causes a lot of safety hazards to the project. At the same time, the construction project has the characteristics such as large amount of engineering and long period of construction. The construction involves many personnel, the construction organization is large and complex, and the technical level of the construction personnel is uneven. Faults often occur in quality supervision, and the construction of every process can not form a running state. Serious impact on work efficiency and engineering quality is not conducive to the smooth construction of construction projects^[3].

3.5 Unclear supervisory responsibilities

The quality supervision of the construction project involves a wide range of departments. Different participants have different rights and obligations, which leads to the chaotic situation of field management. The supervision responsibilities are not clear enough, and the contradiction in management is increasingly fierce, which is not conducive to the orderly development of the project construction. From the perspective of construction engineering, the quality supervision and management department is a public institution. Under the reform and innovation of the economic system, the state has invested relatively little in this area, which has a great impact on the normal operation of the supervision and management department. In addition, there is no scientific management system between various departments, and supervision and management is not in place. Due to heavy workload and much content, the responsibility of quality monitoring can not be implemented to a large extent, which restricts the smooth operation of construction supervision.

4. Construction engineering supervision and management quality

4.1 Establish and improve the construction quality supervision system

The establishment of construction quality management system for construction projects should be carried out in many aspects such as ideological work, organizational work, institutional systems, and economic systems. First, ideologically improve the quality awareness of on-site personnel. While ensuring safe production, ensure the realization of quality goals and schedules. Secondly, improve the quality supervision system and establish a comprehensive supervision and management system. In the process of continuous improvement, it is important to attach importance to the weak links of construction and vulnerable spots, which will be the focus of supervision. In addition, the position responsibility and the division of labor of the quality supervision personnel should be clarified, and the work system and evaluation mechanism of specialized personnel should be established. Effectively divide the quality responsibility into the individual, implement the work of each supervisor, and conduct comprehensive evaluation of the supervisors according to the on-site management. Finally, the corresponding quality inspection department is set up to ensure effective cooperation in all aspects of construction engineering construction. Perform the inspection and supervision of the project quality, standardize the construction and improve the quality of the project.

4.2 Strengthen supervision team construction

Supervision organization as an important participant in quality supervision of construction projects. Supervision company as an important participant of construction engineering quality supervision, should recognise their own supervision responsibility, strengthen the construction supervision team personnel, improve the professional quality and technical level of supervision personnel. First, select experienced supervisors to conduct on-site quality supervision.

Secondly, the supervisor will continue education and post training to enrich the theoretical knowledge and practical experience of supervisors.

4.3 Improve the supervision of building materials

The construction unit should make the material quality progress and maintain the relationship with the supplier. Improve cooperation efficiency, reduce material purchase cost, avoid material problem caused irreparable economic loss. We will improve the competitiveness of the enterprise market at the same time. In addition, the quality inspection of materials should be strengthened, and sampling inspection should be conducted strictly according to the material specifications and quantity. Ensure that the selected test objects are representative and prohibit the use of unqualified construction materials. Do a good job in the inspection of materials, forbid unqualified materials to enter the site, and provide basic guarantee for the smooth construction of the project.

4.4 Improve the quality of personnel

From the perspective of managers, enterprises lack the managerial talents with professional knowledge and rich experience. As a very important strategic resource, human resource is of great significance to the development of enterprises. For construction enterprises, it is crucial to realize the supply of management personnel through recruitment, training and other methods. Enterprises should invest more in this area, and choose interdisciplinary talents with high professional level and rich management experience. Strengthen the training of management personnel, continuously improve management ability and technical level, give full play to the role of managers in quality supervision. From the point of view of the construction personnel, the operation behavior of the construction personnel should be strictly regulated, and the construction should be carried out according to the design requirements and standard standards. Carry out some training and guidance to improve the professional quality and technical level of construction personnel, for example: technical training, field guidance etc^[4].

4.5 Innovative technology level

The technical problem in quality supervision and management is a very important aspect. A good technical solution can improve the construction quality and schedule. Construction enterprises should attach importance to the application of innovative technology, introduce more high-tech talents, and establish an information management platform for engineering projects. We should make full use of information tools to improve the quality supervision and management level of enterprises, comprehensively grasp the overall development of construction projects, so that enterprises can solve the problems that arise in the first place. In the information technology innovation, enterprises should also strengthen the application of intelligent detection equipment and information equipment, and effectively improve the detection quality and detection efficiency. The monitoring data can be compared with the quality standard to facilitate the smooth completion of quality monitoring.

5. Conclusion

In summary, with the rapid development of the construction industry, the quality supervision and management of construction projects are also continuously improving. However, there are still many problems, and relevant units must pay more attention to quality supervision and management. Establish a sound quality supervision system, strengthen the supervision team level, do well in material quality management, improve personnel quality, and innovate technological level. Optimize the quality supervision and management of construction projects, and reduce the quality problems in construction. It provides strong support for the healthy development of modern construction projects and meets the actual needs of the current social and economic development.

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