

Problems and Countermeasures in Construction Quality Management of House Building Engineering

Cuigang Song, Yang Liu, Changqing Zhou, Long Wen, Yunfei Zhao

Chang'an University, Shijiazhuang 050000, Hebei

Tangshan University, Shijiazhuang 050000, Hebei

Chang'an University, Shijiazhuang 050000, Hebei

Harbin University of Civil Engineering and Architecture, Shijiazhuang 050000, Hebei

Wuhan Institute of Technology, Shijiazhuang 050000, Hebei

Abstract: As one of the main types of construction projects in China, the goal of the construction of buildings is providing people with a good and safe living and working space. The significance of construction quality management is also self-evident. At the same time, the effective implementation of construction quality management of housing construction projects has a very realistic impact on the construction enterprises themselves. Therefore, building enterprises should actively study the improvement and optimization of construction quality management.

Keywords: House construction project; housing construction enterprise; quality management; problem; countermeasure

Introduction

The quality of building construction is closely related to the people's quality of life. The effective development of the construction quality management and control work can not be ignored for the dual realization of the social and economic benefits of the building enterprises. Therefore, the construction enterprises should pay attention to the research and analysis of the construction quality management, and analyze the existing problems in the construction quality management of the building, and study the solutions.

1. The significance of construction quality management in housing construction

The construction quality management of housing construction is of great importance, which can effectively improve the overall management level of the building enterprises. In the development process of building enterprises, the management work is closely related to economic benefits and indicators. For housing construction companies, construction quality management can help companies to reasonably avoid operating risks and avoid economic losses. Through the management of materials, personnel, and construction technology, it can also save a lot of costs for enterprises, and it will also greatly promote the improvement of social benefits and corporate economic benefits, making enterprises occupy an advantageous position in market competition^[1]. At the same time, the orderly development of house building construction management can also enable the staff to fully understand the construction procedures or construction links that have potential risks, it can effectively guarantee the safe and orderly construction of housing construction activities, reduce the probability of construction safety accidents, ensure the safety of construction workers, and help enterprises

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establish a good social image.

2. Factors related to construction quality management of building construction

2.1 There are many factors affecting quality

The construction quality of housing construction is influenced by both subjective and objective factors. In terms of subjective factors, construction quality, construction materials, construction equipment and supervision ability are all restricting the quality of the project. For example, when some problems arise from construction materials or construction equipment, it will have a certain impact on the construction project, including the delay in construction progress and quality control. The external objective factors also affect the development of the construction. Because the construction of the house construction project is mostly open-air outdoor operations, the objective geographical environment and bad weather conditions all bring great resistance to the construction, which delays the progress of the project, also has a certain impact on the quality of the project^[1].

2.2 Uncertainty of quality control

There are many kinds of housing construction projects, and there are great differences between different types of housing construction projects in terms of construction requirements and construction environment. Therefore, the construction quality management of building construction has no standard model reference, and there is no fixed system, so there's certain discrepancy in inspection system of the quality of project. Affected by many factors outside the world, the construction quality of the construction project has a certain degree of uncertainty, so the probability of quality problems is relatively large.

2.3 Limitation of acceptance inspection work

Acceptance is an important part of the completion phase of the housing construction project. However, only relying on the completion acceptance of the construction quality of the housing construction can not effectively guarantee the construction quality of the housing construction. This is due to the fact that the building construction project is a whole and cannot be as simple as checking a machine. All parts are inspected and the quality control work must be carried out throughout the construction project. In the process of completion, the staff can not guarantee a timely and comprehensive understanding of its hidden problems, especially the problem of hidden problems of quality, which will be presented in use or after years. Therefore, the work of completion acceptance is only performed from the surface, and it is difficult to carry out deep inspections, so it has certain limitations^[2].

3. Problems in construction quality management of housing construction

3.1 The quality management system is not perfect

According to the analysis of the current situation of construction quality management in China, it can be found that the management system is based on the change of the factory production management system, and with the rapid development of the construction industry, the difference between the quality management system and the actual situation of the engineering is gradually opened. Therefore, the current quality management system of housing construction enterprises in China is generally suffering from poor adaptability and weak management effect. In addition, in the quality management system of building construction in China, there is a great difference between the design of the high-rise building and the design of the low - level building. However, its management work is generally not well-targeted, and it is impossible to effectively manage the construction quality of different types of houses and deduct wages. In short, the current quality management system for building construction in China is not perfect, especially in the formulation of the management system, it is totally inconsistent with the standard, and it cannot meet the demand for construction quality management of China's housing construction projects^[2].

3.2 Management of construction materials

In the construction of housing construction, various materials will be involved to use. Due to the large variety of construction materials and their different characteristics and storage requirements, there is a certain degree of difficulty in management. The influence of the choice of raw materials on the construction quality of the project is self-evident^[2]. But there are some deficiencies in the management of building materials. On the one hand, it is reflected in the selection of raw materials, because the construction project concerns the livelihood of the people, so every link in the project has strict requirements and standards for the materials used. However, due to the lack of scientific material testing technology, it often appears that some of the building materials which are not up to the standard are flowing into the construction, which brings a great threat to the construction and construction, on the other hand, it is embodied in the use of raw materials^[3]. Because the type of raw materials is similar, the confusion will often occur during the use process, which will directly affect the quality of the project.

3.3 The level of personnel quality

In the construction quality management of housing construction, construction personnel, management personnel, and supervisory personnel all play an extremely important role and are the main responsible persons for the construction quality control of housing construction. However, the quality level of the constructors and managers in the current construction enterprises is generally not high, and the correct understanding of the construction management is scarce, which makes the management of the construction quality of the building construction can not be fully implemented^[3]. However, the supervisors in some building enterprises are not professionally trained, lack the professional knowledge of supervision, and have no active and serious working attitude, haven't given full play to their role in the actual work, the supervision of the construction quality of housing construction projects is often just superficial work, which poses great hidden troubles for quality supervision of housing construction.

3.4 Construction process management issues

The construction process of a building is the order that must be followed during the entire construction phase of the project. It is a law that has been summarized through many years of construction practice and is conducive to the standardization of the construction activities of the house construction project. At present, the problem of process irregularities and formality of process management often occurs in housing construction sites, which may cause hidden dangers for the quality of housing construction projects^[4].

3.5 The problem of supervision and management mechanism

Judging from the setting up of China's construction quality supervision and management agencies for building construction, China has also established a quality management supervision department and construction site staff, however, when the actual construction work was carried out, the supervision and management power and management contents could not be well implemented. With the imperfect supervision and management mechanism, the supervisory work could not meet people's demand for construction quality management^[5]. According to relevant statistics, more than 60% of the construction quality supervision institutions for construction projects are set up under the conditions imposed by the state's regulations. They are highly falsified and procedurally difficult to perform in practice.

4. Countermeasures for strengthening construction quality management of housing construction projects

4.1 To establish and perfect the quality management system

In the process of improving the management system, attention should be paid to the management of bad attitudes of the management personnel. Severe punishments may be given to those who cause problems due to their unsatisfactory and unsatisfied working attitudes, so as to promote the overall construction of the management system^[6]. First of all, when the construction quality management of housing construction projects is carried out, it must be

ensured that the management personnel arrive at the construction site to carry out the quality inspection work, and also the quality inspection of each construction link must be carried out; second, it is necessary to clarify the work responsibilities of managers in the work, avoiding the occurrence of numerous management personnel and ambiguous management responsibilities, which is very unfavorable for the development of quality management work. At the same time, the quality management system should be adjusted accordingly based on the types of construction projects and the scale of construction, and the key points for quality management should be defined to avoid omissions or duplication. In addition, many construction enterprises have introduced computer technology in the improvement of management system, and used information management to record the management effect of each system, and use big data to calculate which management technology brings the most benefit to the company, and carry out the key implementation in the future construction^[6].

4.2 Strengthen the control of construction materials

Material is an important foundation for building construction. Every link in construction is inseparable from the use of materials. Therefore, once there is a problem with the management of construction materials, it will inevitably bring a big or small impact on the construction of the project^[7]. Therefore, we should pay attention to the control and management of construction materials, starting from the following points: First, start with quality. When purchasing raw materials, we must proceed in accordance with the requirements of construction design, strictly follow the design requirements for procurement, and must not select similar building materials in order to save costs; secondly, because the environment of the construction site is very complex, various factors must be fully taken into account in the storage of the materials. Strict storage should be performed according to the nature of the materials and storage requirements; finally, during construction, the materials used must be strictly guaranteed to meet the construction requirements. Taking steel bars as an example, it is an indispensable material for building construction, and it is also a material that is used more often. In accordance with the construction requirements, the steel bar should be ensured not rusty, not corroded, and uniform in texture before use, and the content of phosphorus and sulfur conforms to the standard. This series of inspection needs to be reconfirmed at the beginning of the work^[8].

4.3 Strengthen personnel quality control

Any high quality project is inseparable from the role of personnel. The construction personnel are the first line of defense to guarantee the quality of the project. The result of the quality of the project is not the same as the result of the different quality of the personnel. The quality control of construction project is the control of people. Therefore, based on the fact that personnel play a decisive role in the entire process, it is necessary to conduct a rigorous inspection of the construction personnel and start with the quality of the construction personnel. It is necessary to upgrade the quality from the management level while improving the operational skills of specific construction personnel. Strengthen the ideological and political education of employees, enhance the professional morality and behavior standards of personnel, and conduct phased assessments to effectively establish a high-quality, high-standard construction team^[9].

4.4 Strengthen the management and control of the construction process

The construction process is an important link to ensure the orderly development of the project. However, there are a wide variety of building projects, and the construction processes are different in the concrete construction process. Therefore, in the process of construction, the process control should be carried out according to the characteristics of the project. Make reasonable planning for the sequence of construction, formulate concrete construction process flow, strengthen the safety consciousness of the builders, and carry out the project in strict accordance with the construction regulations^[10]. Due to the complexity of the project construction, unpredictable situations are likely to occur during construction. In view of this reality, it is necessary to timely test the construction process and master its specific operation conditions to see if its applicability is strong and whether it meets the construction standards. At the same time, the existing problems can be adjusted under the premise of guaranteeing project quality. From the perspective of

practicability, the scientificity of the construction process can be fully guaranteed.

4.5 Strengthen construction technology control

Construction technology has a certain guiding effect on project construction. Whether the construction technology is advanced, whether it is applicable, whether the application is normative, etc. is directly related to the construction quality of the housing construction project. As the foundation of all production development, people are the most critical factor. Due to the strong professional characteristics of construction technology, in order to effectively improve the control and control effect of construction technology, we must first start with the construction personnel, according to the development of technology, continuously improve the skill level of construction workers, conduct a rigorous assessment of specific construction personnel, and comprehensively consider the construction technical characteristics and requirements, etc. to assign reasonable positions to them. Ensure that the construction staff can meet the technical requirements of the post and realize the rational allocation of human resources^[10]; secondly, the quality problems caused by some construction works in the specific construction process are mostly caused by the irregular operation of the construction workers. Therefore, it is very important to equip the necessary supervision personnel at various construction stages to promptly find out the problems that arise during the construction, and at the same time guide and ensure that all aspects of construction technology are in compliance. As for the supervisors of each post, they also need to conduct standardized training. Only when they fully understand and understand the construction techniques can they find out the errors in the work and ensure the high-quality completion of the project.

4.6 Strengthen construction safety control

Because of the low cultural level and weak sense of safety in the construction workers, there are a lot of safety problems in the construction process, which brings great danger to the safety of the construction workers^[11]. Therefore, in the process of building construction, it is necessary to standardize the construction safety management work, and the organizers regularly check the safety conditions at the construction site so that timely rectification and effective prevention can be achieved. Related companies regularly organize training activities, master safety knowledge and conduct assessments. After passing the qualifications, they are certified to perform operations, improve the safety awareness of construction workers, and ensure the safety and smooth construction of the project.

4.7 Building a perfect supervision system

In the case of imperfect supervision system, first of all, the relevant government departments should continue to improve the regulatory system, and have a reasonable understanding of some knowledge in the building law so as to adapt the control system to some of the basic models in the regulatory law^[12]. Secondly, during the construction process, the company should also pay attention to the effective construction of the supervision mechanism, increase the supervision and inspection of the construction quality management work, and cooperate with the implementation of the incentive mechanism in order to fully mobilize the enthusiasm and initiative of the supervision staff. When the supervisors perform better, they should be rewarded vigorously, and they should also be punished for serious mistakes and fully stimulate the sense of responsibility and honor of the supervisors.

Conclusion

In summary, with the rapid development of the construction industry, the current quality of housing construction has become a key factor in the development of enterprises, and it is also the focus of attention of all sectors of society. In this case, the housing construction companies should further strengthen their construction quality management capabilities in order to highlight their advantages in market competition and promote the healthy development of housing construction companies.

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