

Research on Construction Quality Management of Construction Project

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Abstract. With the continuous development of society and the continuous improvement of people's life quality, the proportion of construction industry gradually increases in our national economy, and has been a pillar industry of the national economy. The healthy development of construction industry directly affects the stable development of our national economy, and involves the interests of security of the public service in China. Therefore, much attention should be paid to the construction quality of construction project by the related department, and the research work on the construction quality management of construction project should be promoted. This paper defines the characteristics of quality management of construction project, analyzes the current situation of quality management and control of construction project in China and puts forward some proposals. Finally, combined the specific example of construction project, especially the new technical method adopted, the process and measure of quality management and control of construction project are discussed in detail in this paper.

Introduction

With the development of market-oriented economy, construction market has become booming. From the perspective of economic interest, there exist many quality problems in construction stage for some construction enterprises, and that may bury the hidden trouble of quality for the construction project. The accident of construction project not only cause significant economic losses but also result in a negative social impacts. Examples include the subsided building being built, the collapsed buildings not reached the lifetime, the collapsed bridge within 5 years after operation and the accidents of subway construction, etc. These accidents not only cause great losses to the state but also influence the lives of people. Especially, the accidents may cause immeasurable economical loss to the people. Due to economic interest, there exist the problem of cheating in work and cutting down on materials in construction stage. Especially, the lack of quality management awareness of builders will subjectively lead to off-specification building. When the building is put into use, all kinds of potential quality problems will occur, and the result can not be imagined. Under this background, this paper defines the characteristics of quality management of construction project, analyzes the current situation of quality management and control of construction project in China and puts forward some proposals.

Characteristics of Construction Quality Management of Construction Project

Building project construction involves many aspects, and is a very complex integrated process. In addition, due to the characteristics of building project such as the fixed location of building, the flow production, the different structure type, the different quality requirements, the different construction methods, the large size, the good integrity, the long construction period and the characteristic that influenced by natural conditions, the quality of construction project is more difficult to manage than that of the general industrial products. It mainly displays in the following aspects:

(1) **Many Factors to Influence Quality.** The quality of construction project is influenced by many factors such as design, materials, machinery, topographic features, geological conditions, hydrologic conditions, meteorologic conditions, construction technology, operation method, technical measures, management system, the cost of investment and construction period. The above

factors can directly influence the quality of construction project.

(2) Large Quality Fluctuation. The construction of project is different from production of the general industrial products. The latter has fixed production lines, standardized production technology, perfect test technology, complete sets of production equipment and stable production environment. In addition, there are many contingency factors and systematic factors to influence the construction quality of project. Therefore, it is easy to produce quality variation.

(3) Concealment of Quality. In construction process of project, due to many sub-projects, intermediate products and underground works, the timely check is very necessary. If the nature is not checked in time, and only focusing on the surface after that, the second misjudgment is easy to happen. In other words, the unqualified products are easy to be considered as the qualified products. On the contrary, if the wrong readings are obtained due to the careless check and the inaccurate measuring instrument, the first misjudgment will happen. In other words, the qualified products are easy to be considered as the unqualified products. About this point, much attention should be paid to it when the quality inspection and acceptance work are carried out.

Safety Problems Existed in Construction Quality Management of Construction Project

(1) Problem of Management Mode. At this stage, there exists the problem of disconnected management mode in quality management of construction project in our country. In the increasingly competitive market conditions, many construction enterprises have been forced to give up the autonomy of construction of construction engineering and the control of construction of construction engineering they should have, and most of them choose to be employed by the contractors of construction project to benefit by charging management fees. In this way, construction enterprises must follow the arrangement of the contractors of construction project, they have to grin and bear it, even if the construction project is transferred or subcontracted to other construction enterprises by the contractors of construction project.

(2) Problem of Production Safety. At present, most administrative staff of construction project do not pay sufficiently attention to the works of production safety and civilized construction. For many construction projects, only the construction schedule and quality are focused, and the security in construction stage of construction project is ignored. In fact, the works of production safety and civilized construction are of great importance. In the daily management of construction project, if the works of production safety and civilized construction of construction project can not be emphasized in the first place, the builders can not work according to the related safety regulations. Under the circumstances, the relatively serious safety accidents are easy to happen. These accidents not only threaten the safety of the builders but also make the project to be delayed.

(3) Problem of Safety System. At this stage, the construction quality management system of construction project is not perfect in China, and there is no corresponding director for each link of project. Therefore, the effective accountability can often not be realized when the safety accident happen. If there is no a set of scientific and systematical safety management system in construction process of project, there is no guarantee of the safety in the entire construction process of construction project, and the corresponding works can not be carried out by the matched institution of production safety. That may cause the failure of safety work of construction project and store up trouble for the safety accidents of construction project in future.

(4) Problem of Safety Expense. Due to ignoring of importance of safety problem for construction project, no enough money is provided for the safety system in construction process. Many construction projects are lack of the corresponding safety facilities, safety equipment and safety implements. Once the safety accident happens, the builders and construction project can not be effectively protected, and the further loss of construction project may be caused.

Countermeasures for Quality Management and Control of Construction Project

(1) Strengthening Education and Training. To ensure the quality of construction project, the construction unit has to strengthen the education and training for the quality management staff. The

regular meeting of quality management education and training should be carried out to raise quality consciousness of the quality management staff and improve their ability of quality management. At the same time, their quality management skills should be improved, and their labor discipline education, ideological and political education and professional ethics education should be strengthened. The improvement of the whole management quality and decision making abilities ensure that they can institute the quality consciousness throughout their own works to make them be more qualified for the quality management work of construction project. If necessary, a scientific and reasonable quality management plan must be prepared to ensure that each quality manager is qualified for his management work.

(2) Perfecting Quality Management and Control System. To ensure smooth development of the work of quality management and control of construction project, the quality management and control system must be established and perfected in accordance with the situation of our country and the current situation of construction industry. Specifically, on the basis of establishment of a scientific and reasonable quality management and control concept, the establishment of quality management and control system must be strengthened, and a solid foundation must be laid for the work of quality management and control of construction project through the perfect quality management and control system.

(3) Clearing Job Responsibilities and Authorities. The smooth development of the work of quality management and control of construction project not only requires the quality management and control concept of all staff and the perfect quality management and control system, but also requires the clearing of related personnel's responsibilities and authorities. The latter ensure that they can run the quality management and control concept, method and technology through the actual work of quality management and control of construction project to make the goal of quality management and control realized on the basis of performing of each construction department's function.

(4) Improving Quality Supervision System. In addition to the above main points about quality management and control, the quality management and control system also occupies a crucial position in the process of quality management and control of construction project. Whether the quality of construction project can be effectively managed and controlled or not depends on whether or not there is a scientific and perfect quality management and supervision system. Therefore, to perfect the existing quality management institutions of construction project, two works must be done well.

Conclusion

With the rapid development of construction industry and the continuous improvement of quality management level of construction project in our country, many derivative and advanced quality management technologies of construction project continue to appear. However, the development of quality management technology of construction project in China in the new period is seriously divorced from the actual management work. So the corresponding quality management technology of construction project can not continuously meet the demand of the quality management and control of construction project in the new period, even hinder the further development of construction industry in China. This paper points out the current problems existed in quality management and control of construction project in China such as the low comprehensive quality of the staff, the lack of quality management and control consciousness, the weakness of management standardization and the confusion of responsibilities for quality management and control, and then proposes the practical countermeasures of quality management and control based on that such as strengthening education and training system, perfecting quality management and control system, clearing post responsibilities and authorities and improving quality supervision system.

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