Analysis on Quality Control Measures of Construction Projects
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Abstract
With the progress of today's society, the rise of science and technology, the quality of life of everyone is also increasing, and more and more construction projects are under construction. Modern, architecture is indispensable in life. The quality of architecture is related to all aspects of everyone. From a big perspective, the quality of the project represents the comprehensive national strength of our country and represents the modernity of our country. The quality of the engineering object represents the ability of the enterprise and the reputation of the enterprise. It is a matter of life and death of the enterprise. In recent years, construction accidents caused by construction quality problems have been common, and building quality has greatly affected the improvement of the national construction sector. Nowadays, the authorities and the state are paying more and more attention to the safety of people's lives and focusing on the quality of engineering projects to ensure their protection. This paper analyzes the causes of the quality and safety of construction projects from various aspects and proposes corresponding control measures, with the aim of reducing construction risks and improving quality assurance.

Keywords
Construction project, Quality control, Construction quality, Construction risk.

1. Construction project quality control concept
1.1 Construction project quality control related concepts
People's understanding of quality was initially at a shallow level, but with the reform and opening up, the country's economy, technology and system have made a qualitative leap. With the improvement of the country's overall national strength, more and more advanced concepts have entered life. There is a new interpretation of quality. The national standard GB/T19000:2008 (equivalent to the international standard ISO9001:2008) defines the quality as: a set of inherent characteristics that meet the requirements[1].When the quality reaches the standard, the project is qualified for construction, so quality is the top priority of the construction project. If the construction company cannot guarantee the quality, then it will not be able to have a place in the construction field and will not be able to adapt to the fierce competition in the construction industry.

The national standard GB/T19000:2000 defines quality control as: "part of quality management, committed to meeting quality requirements"[2].The importance of quality control has exceeded expectations. Now, it is necessary to meet the requirements of the daily life of the country, to ensure the smooth completion of people's lives and work, so that it will not harm the people's lives and property. The construction techniques, material selection, mechanical equipment renewal, advanced construction design, management personnel's cognitive level, construction topographic conditions and climate environment will have an inestimable impact on construction quality. Quality control during construction is very important.
1.2 Purpose of quality control of construction projects

People’s complaints about quality issues have always been an unbeaten topic. When quality problems arise, it is necessary to appoint personnel for maintenance and overhaul. This not only increases the workload of skilled workers, but also the use of personnel in buildings with unguaranteed quality, which can also generate anxiety and worry about their own lives. I am afraid that the buildings that I usually live in will pose a threat to myself. At the same time, repeated construction will seriously consume the country's resources and labor, and may also have a serious impact on the environment, which will have a serious impact on the people’s living and use institutions[3]. For this reason, it is necessary to put quality control in an extremely important position, otherwise neglecting quality will bring unmeasurable damage to the country. If you regret it afterwards, you can't have any way to make up for it. Only when you work normally, strictly control the quality of the project, control the hidden dangers and kill it in the cradle to truly achieve our goal. Therefore, it is of practical influence to master the laws and regulations of the country and to find out the problems of project quality control.

2. Problems in quality control of construction projects

2.1 Construction enterprise quality management supervision mechanism is not perfect

If the construction project management work is to be carried out smoothly, it is necessary to establish a reasonable and well-founded and effective management mechanism, so as to rationally arrange the scope of management work, make it symptomatic, and improve the efficiency of management work. The imperfect management mechanism of the enterprise will result in the unclear distribution of responsibilities, which will result in the staff not understanding their own work, failing to complete the task in time, delaying the task, and making the employees not motivated. In the same way, because the management mechanism is not perfect, the project responsibility assessment tends to be formalized, and the corresponding implementation is not in place. The corresponding rewards and punishments cannot be realized, which greatly reduces the enthusiasm of employees and makes management superficial.

The supervision mechanism is the top priority of the construction enterprise. Without supervision, the quality of the construction cannot be monitored[4]. Some project quality is unqualified, but it can be qualified, factory, put into use, and ultimately cause harm, affecting people's life safety. This is why some enterprises do not pay attention to supervision, but focus on the harm of interpersonal communication and public relations. Even some enterprises set up supervision mechanisms only for the sake of doing things, and there is no reasonable procedure or conditioning plan. This will make the supervision ineffective and fail to achieve the desired effect, which will lead to the quality of the construction. Qualified, serious will cause harm to future children and grandchildren. It can be seen that supervision is important, and the supervisory authority has to establish it, and it must not only be established, but also be seriously established, so that the quality can be guaranteed to the greatest extent.

2.2 The quality management of construction materials is not in place

Buildings are made up of building materials, and the quality of the materials will have the most direct impact on the quality of the building. Over the years, construction accidents caused by material problems have been numerous. Engineering materials refer to the components, processed products, building materials, etc. used in the construction of the project[5]. Whether the project is strong and stable, whether the project is safe and compliant, etc., will be affected by the construction materials. Nowadays, the national construction project has many requirements for the tasks in the construction, the deadline for the construction period is also tight, and the quality requirements are also high. Therefore, the contractor will subcontract the projects outside the scope of their capabilities to the subcontracting units in order to meet the requirements. However, in the process of subcontracting, one enterprise subcontracts some projects to another enterprise, and the enterprise subcontracts again.
As a result, a profit network is formed, and the total cost of funds flows from top to bottom. When the layer is declining, when the final construction unit is in the hands of the final construction unit, the capital is already a small part. Without sufficient financial support, the existing materials can only be used to complete the construction. This will put inferior materials into the construction site, seriously affecting the quality of construction. Similarly, because the cost of construction materials accounts for about three-quarters of the total investment in the building, some contractors will purchase unqualified materials in order to obtain more money for the benefit of the construction materials, resulting in unqualified materials flowing into the construction site. There is also because the procurement staff does not have good moral literacy. In order to collect the intermediate expenses and obtain the secret money, it will purchase bad materials regardless of the company's requirements. The unsoundness of the constraints and management mechanisms of individual enterprises will also cause counterfeit products and raw materials to flow into the construction site, leaving quality hidden dangers.

### 2.3 Management of mechanical equipment is not in place

The equipment in the construction of the project is also important to the quality. The equipment includes the facilities and tools used in the construction project. The cost, duration and quality of construction projects are positively affected by mechanical facilities. For different construction projects, it is necessary to consider the conditions of the construction site, the specifications and structure of the building, the technical economy of the building and the characteristics of the project, and select special facilities. If not, it will affect the quality and will not complete the construction better. Of course, if there is unreasonable mechanical use during construction, excessive use of the machine may result in strain, etc., which will also affect quality. Not only these, some enterprises do not respond to the name, model and number of items in a class when they enter the market; at the time of installation, the quality of the equipment is not checked according to the regulations, and the other side of the project is also a small project. Sweep over, never check carefully[6].

At the same time, during the supervision period, the quality management personnel not only neglected the management of the construction process and technical level, but also neglected the supervision of the production equipment. Many facilities will only be inspected before being put into use, and will be placed and used in the future. None of them are inspected and maintained, and the existence of these problems has greatly deviated from the quality standards. We neglect to repair and test these equipments. We are not only responsible for our own conscience, but also irresponsible for our own corporate image, and we are not responsible for the people's future generations.

### 3. Construction project quality control measures

#### 3.1 Establish and improve the quality management supervision mechanism of construction enterprises

The current construction sector is very hot, and there are many companies involved. The competition is very serious. In order to have a place in the construction field, it is necessary to adjust the management system of the enterprise so that it can keep pace with the times and enable it to be built in the construction. The industry has an advantage. To this end, managers must be regulated in real time, and the unreasonable management system is immediately adjusted, from internal systems to external execution. In the establishment of an organization, it is necessary to set up a number of departments, specific assignments of specific responsibilities, and clear responsibilities. At the same time, on the basis of institutional optimization, it is necessary to further promote and implement the project responsibility system, establish a sound management mechanism, and strive to improve management level[7]. The management responsibility system can make the manager's responsibilities clear and clear. When the vulnerability is discovered, the cause of the problem can be found immediately, the responsibility is paid to the person, and effective measures can be taken quickly to improve.
In order to improve the construction quality of civil engineering to a higher level and to build high-quality civil engineering, it is necessary to establish and improve the construction quality supervision and control mechanism, and to improve the construction quality supervision technology by using advanced construction quality supervision methods and measures. To establish a sound construction supervision and construction mechanism, and to put the construction quality assessment and improvement mechanism at the forefront, and improve the quality of construction through various means. Therefore, according to the construction standards and construction structure design of civil engineering, planning and scientific planning should be adopted for the construction process of the project. Therefore, the civil engineering construction enterprise should form a quality control and supervision team together with the construction unit, the supervision engineering department, the contractor and the owner, and implement the complete process and supervision and management of the civil engineering construction process to ensure the civil engineering. The construction process is in line with the established standards of construction.

3.2 Strictly control the quality of materials
At present, the market is that the supplier is more, the supply exceeds the demand, the variety that the buyer can choose from, the specification is very many, the price change is also like roller coaster, how much money has, this kind of quality also has, under the temptation of price, we should strictly control quality, not only need to improve the ability of purchasing personnel to judge quality, but also strengthen the comprehensive ability, professional and moral quality of purchasing personnel. Make them wholeheartedly serve the company, do not seek personal interests, so as to avoid the lack of their own ability and the choice of unqualified products for their own personal interests, the quality of the impact can not be changed. And we should grasp the material. The overall information of procurement, select guaranteed manufacturers, through comprehensive comparison, select the correct materials, so that the quality can be controlled within the scope, but also reduce funds. The person in charge of the project should accept and accept all kinds of materials one by one, act in accordance with the rules, do not release water, and refuse to accept the materials that do not meet the requirements. This is not only responsible for their own conscience, but also responsible for their own corporate image, but also for the future generations of the people[8]. And the inspection process of building materials needs to review two processes, firstly to check the quality of the materials, resolutely root out materials that violate the national rules and enter the production site, and conduct a second inspection of the units of construction materials to prevent counterfeit products from appearing.

3.3 Strict management of machinery and equipment
The company should consider the characteristics of the project, the progress of the project, the conditions of the work, etc., and choose the right machinery to make it work in the right place. It is necessary to arrange the construction machinery discharge equipment, and it is necessary to arrange fixed personnel for the fixed machinery to make it responsible for its own machinery. If there is a problem, it is a responsibility. Of course, it is also necessary to clarify the mechanical management process and arrange it according to the process. In order to ensure that the machinery can maintain the best working condition during construction, we must regularly maintain and maintain the machinery to ensure that the machinery can maximize its benefits. When entering the market, it should be carefully checked according to the name, model and number of items. When installing, the quality of the equipment should be checked according to the regulations. At the same time, the small projects of the other side should be carefully checked. Relevant technical departments and production departments should also participate in the project. The construction project manager (director engineer) should carry out the test on the large-scale equipment that has an important impact on the safety and quality of the construction project[9]. Of course, the differences in the project should also be taken into consideration. Equipment should be selected according to the location. For example, in the colder northern regions, equipment with cold resistance should be used, and in the southern rainy season, waterproof equipment should be used. At the same time, we must also consider the economy
of the equipment and maximize capital savings. In this way, modern engineering construction enterprises can master the project in a large-scale, wide-ranging and comprehensive classification, and prevent the waste of enterprise assets due to the large amount of machinery and equipment.

4. Conclusion

In China, the construction industry will have serious accidents at any time. These accidents endanger people’s lives and damage the country’s economy, and bring unmeasurable damage to our country. If we regret it afterwards, we cannot make any compensation. Only work in peacetime. When we strictly control the quality of the project, control the hidden dangers and kill it in the cradle, we can truly achieve our goals. Quality control in construction projects is not impossible, and it is possible to control them with the correct technical methods, qualified quality materials, and sound management mechanisms. We control quality not only to reduce trouble, reduce costs, but also for our conscience and for the safety of people's lives. Quality is still one of the three major control objectives, which shows that quality is the key to engineering control. The quality of the project is closely related to our lives, life and property. We must firmly regard quality first as the primary criterion. A hundred years of planning, quality first. The development of our country is related to the quality of engineering in China. If the quality of the project cannot be guaranteed, it will affect the influence and prestige of the government in the international arena.

References