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Safety Risks and Preventive Measures for Construction Supervision of Construction Projects

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1. Introduction

In the continuous development of China's social economy, in the era of big data, people have raised the quality requirements for the quality of construction projects, and they have also received extensive attention from the society. There are security risks in the construction project during the construction of the construction projects. Therefore, the relevant personnel should comprehensively analyze the construction personnel and life and property in light of the actual conditions of the construction, and maximize the strengthening and improvement of construction safety risk management. As long as the safety management is caught, the construction safety accident can be reduced. In the process of building construction, the risks in the construction should be evaluated and effective measures should be taken to solve the problem, so that the construction can be completed smoothly.^[1]

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ABSTRACT

Based on the analysis of construction project safety risk and its preventive measures, it is first necessary to clarify the safety risks and existing problems of construction project supervision and to formulate effective construction procedures. It is necessary to check the production safety of the construction unit, strengthen the company's own safety production management, and reasonably control the risk to familiarize with the construction drawings, and make a special construction plan for the work of the bottom line. Finally, an effective solution is drawn to comprehensively expound the importance of construction project construction safety risk and its preventive measures.

Project Cases:

It is considered that the construction process of the construction project is very complicated, and the construction scale is relatively large, which brings certain difficulties to the project safety production management work. Therefore, it is inevitable that there are hidden dangers of safe production, and may even lead to safety accidents.

In a certain year, urban subway construction, because the corresponding support safety precautions were not carried out during the excavation of the foundation pits, the main reason was that the duties of the safety supervision personnel were not fulfilled, and the safety hazards were not discovered in time, which was affected by geological problems and precipitation problems, causing collapse accidents. . It will have a serious impact on the later construction. From the process of construction of this project, if the safety is not done, it will seriously affect the con-

struction of the project, which will not only threaten the safety of the construction personnel, but also threaten the national economic development.

In the dumping platform of the atrium of the west building of a certain LED lighting and lighting exhibition center in a certain city, four people fell on the platform, and the hospital died after being rescued. After the incident occurred, the detailed investigation was carried out. The main reason was the 8th floor overhanging unloading platform of the accident project. The cantilever beam anchoring did not meet the requirements. After the loading platform was loaded, the cable fell off and the platform rolled over.

In a certain city, the construction of the construction site was neglected by safety regulations. A migrant worker fell from the third floor due to the fracture of the scaffolding. The doctor who was treated urgently confirmed that the migrant worker had died on the spot. It is understood that the deceased did not wear a safety rope and did not wear a helmet when working.^[2]

2. The Importance of Safety Supervision for Engineering Project Construction

In the process of building construction, the basic content of supervision work is mainly to prevent the occurrence of safety accidents. In the management, construction safety should be taken seriously to avoid the occurrence of safety accidents and affect the building. Before safe production, comprehensive management should be carried out, which is also the most important means of production. The main purpose of engineering safety supervision is to ensure the quality of construction and build a safe construction environment. During the construction, the management personnel should fully mobilize the enthusiasm of the personnel, and also regularly cultivate safety awareness for the construction personnel. If the construction workers work in an unsafe environment for a long time, they will have greater psychological pressure and the spirit is in a state of tension. If this is difficult, the staff will not be able to work with peace of mind and lack of interest in work. It also affects the quality of construction. This proves that a safe construction environment should be built for the construction workers to improve the construction efficiency and to complete the work on time, thus promoting the economic development of China's construction enterprises.

3. Construction Project Supervision Safety Risks

3.1 Policy Risk

Policy risk usually means that the relevant policies of the construction project have changed, which has a serious

impact on the construction progress and quality, and at the same time it is an investment in economic loss. Therefore, before the bidding for construction projects, the contractor should conduct a careful study and analysis of the project materials and be able to grasp the overall information of the project. Relevant staff should analyze the policies and forms of the localities and take effective measures in time to avoid serious consequences for the construction project.

3.2 Natural Risk

Construction projects will also be affected by environmental factors. However, for natural risks, it is not an irresistible event that human beings cannot change because of the will of human beings and human beings cannot prevent natural risks. Therefore, relevant managers should adopt economic measures to compensate for the impact of risks. At the same time, because construction work is basically open-air construction work, it is easily affected by natural conditions. For example, in the case of relatively high temperatures, construction workers may experience problems such as heat stroke. Therefore, in the construction work, it is necessary to analyze the risks faced and take corresponding measures to prevent them.

3.3 Operating Management Risk

In the process of construction engineering management, it will also be affected by many factors, which are mainly in risk management. In the process of business management, in the face of different risks, relevant management personnel should conduct detailed analysis in combination with the main problems of the factors. Therefore, the operation and management of construction enterprises not only involves bidding, production and construction, etc. Therefore, there are great risks in operation and management.

3.4 Economic Risk

Compared with policy risks, economic risks are found to be very different. Economic risks are not like political risks, and can be calculated by calculating data. Therefore, the relevant staff should do a good job in information collection and research, and take effective measures for the predicted risks, so as to achieve the purpose of reducing risks. However, for economic risks, companies should have a detailed understanding and mastery of building materials and markets, and adjust their procurement strategies according to information adjustments. When enterprises face economic risks, enterprises can adopt risk dispersion and transfer methods to reduce economic risks.^[3]

3.5 Contract Risk

The contract for the project is mainly the legal document for the management of the project. At the same time, it is

also important evidence in project management. Therefore, the manager of the project must raise the awareness of risk. In the process of drafting the contract, each article of the contract must be analyzed and studied in detail to avoid large impacts due to small mistakes. Effectively analyze risk and ultimately reduce risk.^[4]

3.6 Construction Technology Risk

In the process of construction enterprise development, the construction technology risk mainly comes from the management level and construction quality. The engineering design plan of the construction project is mainly implemented after the relevant personnel determine it. The construction enterprise should pay attention to the change of the construction plan, adjust the construction plan in time, find out the problems in the construction, and effectively reduce the occurrence of construction risks. At the same time, the construction unit should also pay attention to the problem of the claim, evaluate the construction technology in time, and formulate a reasonable construction plan to ensure smooth progress.

4. The Main Causes of Construction Project Safety Risks

4.1 The Restriction of Construction Environment

In the construction industry, because construction and the main body cannot be transferred and divided, the construction of workers is usually carried out in the open air. In the process of building construction, there will be some constraints, including natural conditions such as high-altitude operations, high winds and precipitation. In this complicated and relatively difficult construction situation, the construction quality and progress will be affected. Therefore, the relevant management personnel should operate in accordance with the actual conditions of the construction. Because the geology is different, the construction method is different. It is necessary to ensure the consistency of the appearance and design of the construction building. If they are inconsistent, it will directly cause construction safety risks.

4.2 The Construction Projects Are Highly Processable

In the construction project, a perfect communication platform should be established to promote mutual cooperation and assistance between various departments, so as to ensure the progress and quality of the construction project. There will be frequent movements of personnel on the construction site, and the personnel work will be out of order, once it appears in management. Such problems can have serious consequences. In the construction project,

because personnel are required to unload and dispose of equipment and materials, it is easy for personnel to encounter danger during the process of walking. There are also some personnel who work in more dangerous places. For example, cranes in aerial work, within the specified range, there will be some other staff, in case the hook items fall will have serious consequences. Therefore, there is no effective communication between the staff, and it is not possible to effectively match the equipment reasonably, which will affect the occurrence of security risks to a certain extent.^[5]

4.3 The Quality of Construction Workers is Not High

In the process of building construction, there are still many workers who are under the subcontractor's package team. The construction unit adopts this method, which can reduce the construction cost of the enterprise. It is precisely because of the quality of the construction workers that the quality of the project and the safety of the project have a great impact. Some enterprises will also use migrant workers to participate in the construction of the project. The migrant workers not only have no professional skills, but the comprehensive quality is not high, which has an impact on the quality of the construction of the project. It also poses a threat to the safety of the construction workers on the construction site. This shows that enterprises have not effectively implemented safety education and paid attention to the production process.

5. The Preparation Work for Construction Projects

5.1 Check the Production Safety of the Construction Units

Before the construction of the building, the relevant personnel carefully check the production safety of the construction unit. The main check content is the rules and regulations of the construction unit's equipment, construction technology and management system. The construction unit in the production process, as long as it meets the production conditions. Relevant standards can ensure the safety of construction workers and reduce the risk of property damage. At present, China needs to establish a sound safety production system and prohibit contracting projects. Therefore, in the supervision project, it is necessary to carry out real-name certification. At the same time, it is also necessary to examine the safety of the completed projects, regular maintenance and inspection.^[6]

5.2 Formulate Special Construction Plans

In the process of building construction, it will be affected

by internal and external factors, such as deep foundation pit engineering and formwork engineering. To ensure production safety, effective protective measures must be taken. On this basis, the relevant staff must combine the actual characteristics of the project construction and adopt the construction plan. The supervision department should focus on the safety production technology, and on the basis of safety production, reduce the danger of construction. Strictly review and unify the construction data and plans to avoid mistakes, which will affect the construction quality.

5.3 Be Familiar with Construction Drawings, and Do a Good Job of Handover

In the early stage of construction, the designer should design according to the actual situation of the construction. The chief management engineer should establish a design team that can familiarize with the analysis and analysis of drawings, and identify construction safety issues, take effective solutions to the problems, and develop feasible construction plans. At the same time, the construction unit should actively participate in the construction of key projects such as new materials, new equipment and new technologies used in construction. It is recommended that the designer ensure the safety of the construction personnel and prevent safety during the design process.^[7]

6. Safety Risks and Preventive Measures for Construction Supervision of Construction Projects

6.1 Strengthen the Enterprises' Own Safety Production Management and Rational Control of Risks

In order to solve the problems of the supervision industry, the construction market should be planned, but each enterprise should further optimize and improve the internal management system to consolidate the competitive position of the establishment of the market. First of all, the responsibility system for production safety is the main core of enterprise safety production. Only in the process of continuous development and improvement of relevant rules and regulations, enterprises can achieve safe production. In the process of development, the construction engineering construction laws and regulations are mainly used as the basis of enterprise standards. The relevant staff should prepare a complete set of project safety supervision responsibility system for the supervision enterprise. The state requires the supervision of the company's responsibilities, should undertake all the supervision safety duties, mainly through the establishment of the responsibility

system, effectively implement each management project, each staff member should bear the responsibility for safety production management.

6.2 Pay Attention to Construction Projects and Establish Insurance Work

In the face of serious safety establishment risks, the supervision unit should take double effective measures to avoid and transfer risks, and at the same time establish and improve the insurance system. At this stage, the risk awareness of the supervision unit has been continuously strengthened. The key work of strengthening risk management awareness and establishing risk management mechanism is the insurance system for safety supervision.

6.3 Control the Safety Management of Hazard Sources

In order to improve the safety management level of dangerous sources, relevant staff should identify and evaluate the construction phenomenon. According to the basic content of the construction safety management regulations, it is necessary to formulate safety hazard source management standards at the construction site in combination with the actual conditions of the project, and construct a site construction hazard source management system and emergency response speed. At the same time, different safety control measures can be formulated according to different hazards. There are certain gaps in the geographical and construction conditions involved in different projects. Construction related personnel should determine the major hazards and hidden dangers of safety accidents. After systematic analysis, finalize effective measures to prevent and control risks.

6.4 Conduct Strict Supervision Measures Implementation Procedures

Construction enterprises should improve the internal supervision system, clarify the safety management objectives, and implement the safety management responsibility to each worker. If there is a safety accident at the scene, they are directly responsible. It is good for construction enterprises to establish a supervision team to stipulate practice to carry out safety supervision on the construction site. For some construction units without relevant regulations, they must be investigated for legal responsibility and arouse severe punishment. In the process of safety supervision of construction engineering, managers should carry out maintenance and inspection of daily phenomena. In the inspection work, if there are some illegal phenomena or safety hazards, they should be strictly handled in accordance with the relevant supervision procedures. Therefore, the construction party should be notified in a

timely manner, combined with measures to carry out rectification, and then written notices and instructions should be issued. Therefore, we must ensure the timeliness of the construction documents. After the notice, if the construction personnel have not taken measures to carry out the rectification, the establishment personnel should organize the construction unit in time, the construction unit, etc. to hold the special supervision meeting, etc. After that, it is emphasized in combination with relevant regulations. If the construction party does not carry out rectification, or refuses to rectify, if the construction party is required to stop work under severe circumstances, the supervision engineer should report to the superior.^[8]

7. Conclusion

In summary, China's national economy is developing at a relatively fast pace. The development of the construction industry is the main pillar of production and lays a good foundation for China's economic development. Among them, in the construction industry, supervision work is very important. In the whole construction process, each construction link should be carefully and carefully treated. In combination with the low quality of construction workers, the Highly Processable construction, and the Restriction of the construction environment, comprehensively analyze the countermeasures and effectively improve the construction quality. While ensuring the safety of construction workers, it is also necessary to improve the economic benefits of construction, which will ensure the smooth completion of construction projects.

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