

Discussion on Safety Production and Construction Safety Management of Construction Enterprises

LIANG Xian-zhong

Puyang City Construction Engineering Safety Supervision and Management Station Henan, Puyang, 457000, China

Abstract: At present, due to the continuous development of China's social economy, urban construction has also been developed by leaps and bounds. At the same time, people on the construction quality and safety requirements are gradually increased. With the concept of people-oriented deepening at all levels will do a good job on safety production, strengthen the safety responsibility on the work, so that the safety responsibility is more important into the corporate culture to ensure the safety of production. However, due to various factors, the construction enterprises in the construction process, safety production and management there are still many shortcomings, not only affect the safety of production, back to the hidden potential security risks of construction, resulting in accidents often be occurred, threatening the safety of life and property of people. Therefore, this article focuses on the construction management of the safety management of the study.

Key words: construction; safety production; safety management

Introduction

Safety production and safety management as a social and systematic construction project, it is not only the work responsibilities of individual departments and individuals, but also the full participation and cooperation. Therefore, in the actual construction process, in order to ensure the safety of construction, construction enterprises and all employees must be fully aware of the safety of production and safety management on the construction of orderly and personal safety on the importance of "the People's Republic of China Safe Production Law "and the industry safety production management standards, norms, regulations, such as the implementation of the implementation of every detail, in strict accordance with the relevant provisions of the construction to ensure the smooth completion of the construction works.

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1. Problems in Safety Production of Construction

1.1 Construction safety management problems

As most of the construction work needs to be carried out in the outdoors, coupled with the flow of more personnel, the use of large amounts of resources, complex construction technology will increase the construction site risk, and these need to have a sound safety standards to its to control. But by the relevant laws and related standards imperfections in the construction industry there is no unified, sound safety standards system, some projects in the construction process cannot be implemented safety standards, resulting in the implementation of safe construction management is not enough.

1.2 Safety management does not match the work plan

In the construction process of each construction link are closely linked, so to implement the work of the site safety management must have a certain construction costs, safety training will also take the construction of the normal construction time, so caused influenced on the duration. Combined with the actual situation in terms of the current situation, many construction companies are over-pursuing economic interests, the pursuit of timely construction of the construction period, but ignoring the construction of the safety management, resulting in safety management cannot effectively link to other work, in the construction of many loopholes, resulting in security management does not match the overall work plan.

1.3 Construction personnel do not fully understand the safety management work

Site construction workers as the main body, but also the main staff of implementation of safety management, the implementation of management work is the need for their real-time operation, so increase the intensity of training personnel safety awareness, so that they are fundamentally aware of safe operation and safe construction importance. But many construction units have ignored this point, but focus on construction efficiency, did not improve the safety awareness of construction workers, resulting in the construction process of misuse of equipment and facilities, illegal operation and other conditions have emerged, reducing the overall construction quality and safety management level.

1.4 construction unit security funds inadequate investment

Project construction units are reluctant to increase safety measures. Due to inadequate safety costs, safety measures are not effectively guaranteed, and at the construction site, safety precautions, insurance and warning devices are missing or nonexistent. In addition, construction workplace safety and security measures are flawed. Due to the safety defects in the construction site, the safety measures of the construction work boundary are often not in place. The construction elevator, the staircase and other parts reserved in the construction project has not taken effective protective measures. In the basement construction, the lighting is insufficient and the ventilation effect is poor. High-level area does not set the security warning signs, resulting in frequent accidents.

2. Construction Safety Management Measures

2.1 Strengthen awareness, tight safety production "string"

Strengthen the awareness of safe production responsibility is to implement the premise of safe production, but also the cornerstone. Always tightly managed safety production, firmly establish the concept of people-oriented, safety production has always maintained a kind of thin ice, such as the abyss of the state, and always adhere to scientific development, security development is the inevitable requirement of construction enterprises, ignored the safety

production, will pay a painful price. Only the tightening of the production of this string, improve safety awareness, the implementation of safety awareness of production in order to provide a strong guarantee for safe production.

2.2 Establish and improve the safety management system

To establish and improve the safety management system to give a full management of security management and the project department should also be required to complete the safety of full-time staff and safety full-time management personnel should be appointed by the company and give it sufficient power to implement the " Safety first, safety production one vote veto system ". Figure 1 shows the construction enterprises should do a good job in all aspects of security management.

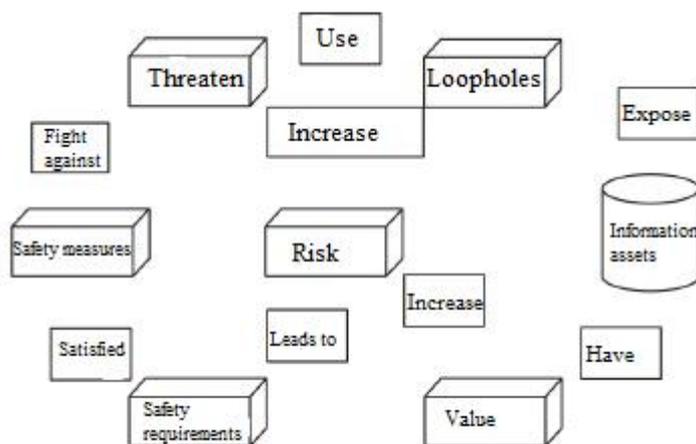


Figure 1 Construction enterprises should do a good job in safety management

2.3 Strengthen the construction safety education

Strengthen the construction site safety education must be given for each of the construction staff, so as to be able to ensure that all the construction workers have adequate safety awareness. Safety education and training work is divided into theoretical safety education and training and technical safety education and training. Theoretical education and training mainly involves the construction workers safety production rules and regulations to ensure that the construction site of all construction workers can understand their duties, each construction workers have a sense of safety production. Technical safety education and training, mainly for the construction site technical staff and management personnel for the safety education and training, technical safety education and training not only to ensure that all the operational skills of the stability and scientific, but also to the construction workers the construction of a certain role in guiding.

2.4 Establish enterprise network information communication platform

Enterprise safety production network information communication platform with the help of information technology to establish enterprise network information communication platform, such platforms can upload reports, documents, photos, and can achieve the program approval process to meet the communication needs of users, you can also increase remote monitoring function. This platform can not only operate through the computer, but also in mobile phones, tablet PCs and other mobile terminals in which to achieve mobile office. Enterprise network information communication platform through the Internet to achieve information sharing and process integration, to achieve enterprise-class management information integration, the formation of the group (or headquarters), sub-companies, project three linkage,

information sharing, to ensure that enterprise (group) level to understand the actual situation of all projects under construction, a change in the past business management extensive, low risk prevention and other issues, in order to achieve the unity of the enterprise and standardized management.

2.5 Construction of emerging safety production information technology

(1) First-line construction workers "peace card" system. Through the construction workers to identify the identity of the identity of the security IC card, the use of information technology, construction workers go into the construction site before the establishment of the file for the construction workers to achieve the employment, training, attendance, reward and punishment, payroll, information query and so on the information management, to achieve the construction industry practitioners of the fine management and services.

(2) Virtual simulation construction technology BIM technology, the establishment of virtual construction and construction process for the safety control of the construction model, and then use simulation and virtual reality technology to achieve virtual construction, dynamic demonstration of the construction process and after the completion of the construction process to achieve the visualization, simulation analysis, simulation test, digital training, dynamic identification, early analysis of the impact of the project safety factors, to achieve the purpose of safety control.

3. Construction safety monitoring technology

3.1 Structural safety monitoring technology

The technology is mainly used in the monitoring, monitoring of the safety of the bracket and support, supporting structure, hanging basket, template, cable and building structure. The monitoring system generally includes sensors, data acquisition and transmission systems, databases, state analysis and evaluation and predictive display software. Through the analysis of positioning, deformation, stress and strain, load, temperature, structural dynamic parameters, it is judged and predicted structural safety status , in advance to take appropriate control or reinforcement measures to prevent the occurrence of structural safety incidents.

3.2 Deformation Monitoring Technology for Deep Foundation Pit Excavation

The deep foundation pit adopts the information construction method, establishes the design, construction and supervision of the three parties to share the data platform, the monitoring data input data acquisition and deformation alarm analysis software, at any time according to the site geological conditions and monitoring results on the design and construction program to dynamically adjust and optimization to achieve the excavation of the safety and stability of the control. Figure 2 for the deep foundation pit design.

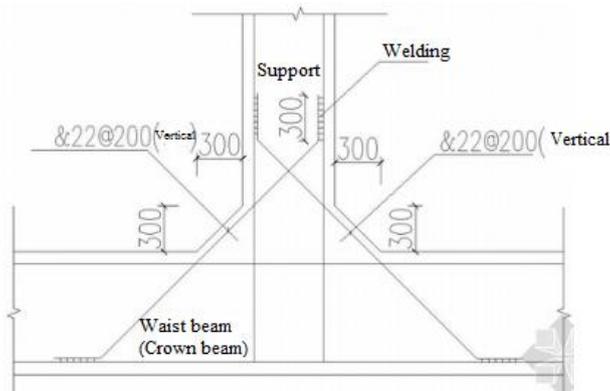


Figure 2 Deep foundation pit design

3.3 Excavation blasting monitoring and control technology

In some construction projects, the stone blasting tends to have some bad influence on the foundation, the building itself and the surrounding environment. It is necessary to detect and control the various kinds of effects caused by the blasting, both from the engineering point and the environment. Excavation blasting monitoring technology is the application of vibration velocity sensor, strain gauges, osmometer, water break sensor, pulsating pressure sensor, toxic gas detector, blasting noise test system and sound level meter, respectively, with various types of data acquisition and analysis device composition detection system, through the detection parameters and blasting design in close connection, timely guidance and adjustment of blasting design parameters to effectively control the blasting operations on the project and the surrounding environment.

4. Construction Standardization of Construction Engineering Safety

4.1 Optimization of construction plan

The implementation of new projects to highlight the technical first. Before the implementation of the project to plan the preparation of security management program, construction organization design and the main construction program, which is an important program to be demonstrated, to go through the scientific selection, safe, reasonable and economically viable technical solutions. According to the characteristics of the project application of new technology, eliminate backward energy consumption technology to promote the use of the industry the company is currently widely used, which is a mature, advanced innovation, technological innovation and innovative technology, with low cost and high security technology. So we have a sense of innovation in the program, do not be confined to the old technology. For example, in the foundation pit excavation program, we have many options can be selected either to excavate the slope which can also be an anchor support or set the anchor wall or a variety of program applications.

4.2 Improvement of temporary electricity consumption

Construction of electricity is an indispensable source of power for construction projects, but electric shock is a high risk factor for safety hazards. Project can be configured according to TN-S system "three-phase five-wire" system, both to enhance the electric shock protection, without affecting the effective operation of electrical equipment. The configuration of the system is to control the reliability of the PE line and repeat the grounding system from the power distribution system to ensure safe use of electricity. To solve the insecurity of electricity, one is to adopt standardized management, the second is technically innovative. The application of the new type of switch box is an effective way to solve the above problems. That is, in the switch box to configure the appropriate air switch, leakage protector, increase the indicator line of electricity conditions, set the socket outside the box with a sliding block to limit the number of use of the socket. This can achieve the "one machine one by one leak on security", to prevent private pull chaos then, but also reduce the intensity of electrical work to facilitate the construction of electricity and standardized management.

4.3 Update of safety protection facilities

Safety protection facilities are a life protection line for safety production at the construction site. Protection of the entrance, the construction area, the office area, the protection of the living area, the implementation of safety measures in the construction site can be said to effectively to ensure the orderly production of safe production, reducing the occurrence of security incidents. In many construction sites are accustomed to using steel pipe safety net protection, neither durable and no construction image, high cost, closed lax, easy to be damaged and poor stability. In accordance with the standard shape, tooling protection facilities are safe, reliable and economical and good outlook, durable, high turnover rate, high recovery value. As the project leader in addition to the quality of integrated management should have

a strong desire for security management, that is, security management must be high.

4.4 Application of energy saving and environmental protection

In the construction of mining enterprises to explore the potential of space is very large, such as living area, office area, the main channel, the main road lighting to switch to LED light source with solar power. In our country the use of solar energy technology is mature, energy saving, environmental protection, pollution-free, easy to install, maintenance-free, economic and many other advantages, and compared with the traditional lighting have lower power consumption. As the energy saving is directly related to the economic interests, project manager's enthusiasm are relatively high, the living area set up solar water heaters, toilet set water-saving, on-site water recycling system is more common to use.

Conclusion

In short, to strengthen the construction site safety management for the entire construction project safety and efficient has a significant role in promoting, so in the daily safety management process, we need to promptly solve the problems, and constantly improve the safety awareness of construction workers, through the construction site safety management, and continuously improve the economic and social benefits of enterprises.

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