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# **Discussion on Civil Engineering Safety Construction Management and Measures**

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*Abstract:* The construction safety of civil engineering has always been a problem puzzling the construction unit. If the construction site frequent safety accidents, not only will reduce the economic benefits of the construction unit, but also will affect the image of the construction unit. This paper analyzes the practical significance of civil engineering safety construction, and expounds the civil engineering safety construction management measures, for civil engineering construction unit reference.

Keywords: Civil engineering; Safe construction; Management; Measure

## Introduction

In recent years, with the development of the national economy, China has strengthened its infrastructure in an all-round way. Civil engineering construction is an important foundation engineering of construction engineering construction, which has a pivotal position. Especially because civil engineering construction has the characteristics of high risk, it is easier to guide safety accidents. If we do not strengthen the civil engineering safety accident prevention, it is very likely to cause major safety hazards or even irremediable losses, thus strengthening the civil engineering construction safety management is crucial.

## 1. The practical significance of civil engineering safety construction

Although enhancing safety management requires a certain investment of human, material and financial resources, safety management can also bring equal or even excess returns. To ensure the safety of the construction process, safety can bring great economic benefits, but also can bring health, stability, happiness and other social benefits. Safety has two basic functions: firstly, it can directly reduce or avoid the damage caused by accidents or harmful events to human, society and nature, realize the function of protecting human wealth and reducing unbeneficial loss; secondly, it can ensure labor conditions and maintain economic value-added process, and realize the function of indirectly adding value to society.

## 2. Analysis on the problems of construction safety management

#### 2.1 Personnel Issues

In the construction preparation stage, the enterprise only pursues the construction progress, speeds up the construction. Moreover, the construction personnel are not fixed, a lot of construction staff are recruited for short time, there is no time for professional training. They are not very aware of the difficulty and characteristics of the project to be built, only to work mechanically. As for project managers, who often have some social connections but without work experience, and also the supervision units, are often multi-position supervision engineers.

#### 2.2 Weak security awareness

At the construction site, the awareness of civilized construction is not strong enough, it can be said that they do not pay attention to it, and they blindly believe that civilized construction is only used for perfunctory inspection by superiors. Even some construction sites don't even have fire awareness; There is no drainage system and the roads are not smooth; The closed management of some construction sites is still not in place or has not attracted enough attention; A considerable number of construction sites still do not pay enough attention to living facilities, and there is a simple phenomenon that does not meet the regulations; Some construction sites still have proper signage, and most of the safety signs are not hung in a reasonable position. Workers do not have a good construction environment, and even a good living environment, a large part of the reason, can not be blamed on the enterprise, including the staff problems, did not pay enough attention to civilized construction.

#### 2.3 Inadequate implementation of supervision

At present, there are still some formalisms in safety supervision and management. For the construction site safety problems are only ver-

bal, not in place, or some safety supervision staff only focus on doing some external safety work. For some practical safety supervision problems, the safety supervision department not only should carry out investigation on the safety status of the construction site, but also should compare with the data in the safety management. Only in this way can we understand the safety status of the construction site more deeply. It is also emphasized that the safety supervision department must pay attention to the management of hidden trouble in the construction site management and follow-up inspection.

## 3. Effective measures for the safety management of civil engineering construction

## 3.1 Strengthen the collection of materials and the preparation of materials before construction

(1) Relevant personnel shall be responsible for the collection of the materials prior to the construction, formulate certain rules and regulations and corresponding post duties. It is strictly prohibited to forge the construction safety materials, and the examination materials shall be examined carefully and truthfully. Moreover, before the construction, carefully read the design drawings until fully understand, under the premise of familiarity with the drawings, check whether there is a problem in the drawings, if there is a problem in a timely manner to the design unit to react, in the case of agreement between the two parties to modify the drawings, to solve the design problem.

(2) In terms of construction materials, all departments of construction shall negotiate and purchase unified and qualified materials. Make a detailed purchase list to avoid problems with your purchases. Do a good job in the transportation and storage of materials to avoid damage to the materials before they are used, which will affect the quality of the construction project.

## 3.2 Strengthen the safety inspection system

In order to ensure that safety management plays an effective role, it is necessary to create and improve a security inspection system. Increasing the inspection and supervision of on-site construction safety, regularly inspecting the construction of the project, and make corresponding records. Clarifying the important parts and key links of engineering construction, as well as some of the positions that are prone to potential safety hazards. Implementing the security inspection work to a certain link, a certain position, a certain person, etc. of a specific project, and refine the security inspection project. For example, before the implementation of on-the-job inspection, disclosure, records, etc., to organize a safety evaluation activity on a weekly basis, while focusing on strengthening the safety inspection of some key construction machinery and equipment, such as: tower cranes, scaffolding, derricks, etc., to ensure that these equipment can play a normal role, until the inspection can be really put into use.

Once there is a problem in the process of security inspection, it must be handled, corrected and solved in a timely manner, and special personnel must be set up to supervise. For security problems that cannot be solved immediately, warning measures should be taken to strictly protect them, and only in this way can the level of security inspection work be comprehensively improved.

## 3.3 Improve safety awareness and ensure construction safety

(1) Strengthen construction safety education for construction workers and improve their safety awareness. It is necessary to ensure that the construction personnel wear all the equipment during the construction of civil engineering projects to ensure their personal safety. When working on the construction site, the staff should first wear a safety helmet and arrange a closed safety net around the construction site to prevent other personnel from entering. When working at height, the high-altitude construction personnel first fasten their safety belts to ensure personal safety. In addition, the construction site should be cleaned up in time to ensure that the construction site is clean and tidy, and the computer monitoring of the construction area with high technology should be used to ensure smooth and safe construction.

(2) Improve the construction safety awareness of management personnel. Managers should adhere to the principle of safety management and adhere to safety first. To manage construction, we must first grasp safety, integrate safety into construction, and promote and ensure the smooth progress of construction. Strengthen the safety management of construction projects, formulate a strict safety management system, and take strong safety measures. It is also necessary to implement safety responsibilities, implement responsibility management, strengthen safety education, routine supervision and safety inspections for construction personnel.

## 3.4 Reasonable management of construction equipment and site safety

To a large extent, construction equipment is also related to the safety of construction, and it is necessary to regularly test and manage the construction equipment on site to avoid obstacles and hidden dangers caused by equipment in operation. For example, there should be special staff for cleaning, operation, management, and monitoring of the elevator at the construction site to prevent and avoid its improper fall. Professional maintenance and replacement of some faulty equipment in a timely manner to ensure the normal progress of construction operations. At the same time, some warning and prohibition signs should be clearly posted on the construction site to remind the workers on the site that the place is dangerous. Strictly require the wearing of safety helmets, do a good job of their own preventive measures, and use some encouraging words and post on-site operation systems to supervise the construction personnel. These can ensure the safety of civil engineering construction

site operators to a certain extent, and further enable the construction unit to carry out better and more orderly management of the site.

# 4. Conclusion

In recent years, with the rapid development of construction projects, safety accidents have also been increasing. There are still certain deficiencies in the safety management of construction in China, and there are many new things that need to be studied in the process of project management. As a project manager, it is necessary to continuously improve their safety management ability in their work and implement effective safety management measures.

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