# **Research on Construction Safety Management Mode**

# Yang Cao, Limin Du

Harbin Vocational & Technology College, Harbin, Heilongjiang, 150040, China

Keywords: Construction Safety, Construction Management Model, Improvement Method

**Abstract:** Construction safety is a prerequisite for the sustainable development of the construction industry. It is vital at all times to ensure safety. However, many safety management modes of engineering construction have problems, safety management effectiveness is not obvious, there is no clear management system, and safety supervision is not in place. As a result, the construction safety situation is not good, there are many hidden dangers and many accidents during construction. It is imperative to explore safety management mode and strengthen safety management. The article has carried out research on the construction safety management mode.

#### **1. Introduction**

Construction engineering has certain dangers. The use of mechanical equipment and temporary electricity use can easily cause a series of safety problems such as mechanical injury or electric shock accidents. These accidents often bring huge economic losses and even casualties, so construction Effective safety management measures must be taken to avoid accidents and ensure construction safety. However, in reality, many constructions lack safety awareness, fail to take necessary safety management measures, and safety management is in the form of engineering accidents. Not only has it seriously affected the construction period, it has reduced the quality of construction and caused adverse social impacts. Therefore, in the construction of the building, effective safety management measures should be taken according to the actual situation, and the construction safety management mode should be scientifically constructed.

#### 2. Common dangerous points and hidden dangers in construction

There are many dangerous points in construction. Firstly, according to the relevant survey data, the accidents caused by object impact and machine damage are relatively large, which are the main factors leading to construction safety, which often occurs when the construction workers are physically tired or The result of distraction; secondly, many mechanical equipment will inevitably be used during the construction process. The quality of the mechanical equipment is insufficient, and the control does not meet the requirements. It may induce safety accidents; again, there are procedures in the three-dimensional cross-operation of construction projects. The characteristics of complex and high-altitude operations, if the process is not properly connected or the workers' safety awareness is not strong, may lead to some safety accidents falling from high altitude; finally, electrical safety accidents are also common types of dangers in construction, including electric shock and casualties, Improper electrostatic handling and misconnections can cause serious safety hazards.

# **3.** Problems in the construction of construction safety mode

The problem of imperfect safety management system is widespread in all major construction and construction units in China. First of all, the problem of imperfect safety management system is reflected in the excessive pursuit of traditional management mode, ignoring the institutional innovation that keeps pace with the times, leading to the problem that many old management systems are not adapted to the new process requirements. Second, the security management model The lack of enforceability of the construction has led to the failure to implement the system after the

completion of the system construction. After a long time, the role of the entire system construction has been weakened. Finally, the imperfect safety management system will lead to a decline in the on-site management performance of managers, or even directly Control of the construction process leads to frequent safety incidents.

The problem of insufficient professional quality of safety management personnel is also common among major construction and construction enterprises. From an objective point of view, most of the safety management personnel are from various universities, and their own talents with rich experience in on-site safety management are very scarce. In addition, in recent years, China has cultivated grassroots on-site management and management talents for construction projects. Insufficient implementation has even led some companies to hire on-site management personnel with no background in terms of expertise to cut costs, further affecting the actual management level and quality.

Lack of on-site management is an important factor leading to a decline in the efficiency of safe production management. At present, the problem of the lack of on-site management in most enterprises is due to the lack of awareness of on-site safety management in the planning process of the enterprise, resulting in insufficient authority of on-site safety management personnel, even if it finds safety hazards and problems, The direct intervention in the production process and the way, the resulting safety management risks are also very common, and must be highly valued.

Through the analysis of the necessity of building construction safety management, it is not difficult to see the importance of safety management. Safety hazards in construction are ubiquitous, threatening the safety of construction workers, and it is necessary to strengthen safety management. As the main body of investment in construction projects, the owners are the link connecting the participants, which is at the core of the project construction and has a decisive influence on the construction contractor. However, in many projects, the owners lack understanding of construction safety management issues, often choose to evade construction safety management responsibility, and turn a blind eye to safety hazards. Although some owners have the willingness to participate in construction safety management, they lack safety management skills and professional knowledge. They do not have detailed safety management plans and lack of corresponding safety systems. As a result, safety management workflows are in the form and safety management functions cannot be effectively implemented. As far as the current status of building construction safety management is concerned, the safety management of the project safety management code is rarely followed, often staying at the stage of shouting slogans, safety management work has not been effectively implemented, and no safety management personnel have been set up on site. Construction safety supervision Not in place, there is a serious phenomenon of "reproduction, light management". In the specific safety management work, the division of powers and responsibilities is very unclear, there is no corresponding functional department, the safety management objectives are not clear, and the safety management process is unscientific, not rigorous and unreasonable. Moreover, the safety management system is not perfect, and many temporary personnel are deployed. Most of these personnel have not received systematic training, lack of professional skills in construction safety management, and their professional ability does not meet the requirements of the post, and it is impossible to carry out high-quality construction safety management. Due to the lack of rigid system constraints, construction workers and safety management personnel often have a chance to work hard, the sense of responsibility is not strong, and the negligence of work is very serious, which undoubtedly increases the safety risks. For example: In October 2015, the construction workers in a residential area in Yishan County, Zhejiang Province did not wear safety equipment as required. Although the safety management personnel made an exit warning, the construction personnel still refused to wear safety equipment, and the safety management personnel did not further prevent it. In the case of the event, an electric shock accident eventually occurred. Although the on-duty personnel performed a timely rescue, they eventually died of injuries. It is not difficult to see that in this incident, it is obvious that the construction workers lack safety awareness, and the safety management personnel have not fulfilled their due safety management obligations. There is no doubt that the safety management effectiveness has not been effectively exerted.

#### 4. Construction safety model construction strategy

Improving the integrity of the safety management system is the basis and prerequisite for building a construction safety model. In the implementation process, the relevant managers should clarify the value and importance of construction safety management, enhance the safety management system construction by strengthening the safety technology investment and capital investment, and construct the corresponding safety management department according to the actual engineering requirements. Ensure the standardization and institutionalization of safety management. In addition, through the full responsibility of the full-time department, the safety management objectives can be effectively clarified, and the effectiveness and pertinence of safety management can be further strengthened. After the completion of the system specification, it is necessary to appropriately add some rigid constraints to improve the efficiency of personnel execution, and the value of system construction can be reflected through performance appraisal and other modes.

The comprehensive quality level of relevant personnel is one of the important factors that determine the effectiveness of enterprise construction safety management. Since the construction project itself has the characteristics of complex construction, strong professionalism of equipment and processes, it is necessary to do a good job in the management of comprehensive quality when implementing relevant work, to ensure that all personnel involved in construction and construction have certain professional skills. With reliable practical experience. As the on-site management personnel of the enterprise, it must have rich first-line management experience, and play the role of safety management through effective management. This can also realize the training effect of the professional skills of the personnel, and also improve their business ability and their own occupation. Planning has laid a good foundation. While mastering basic construction safety knowledge and skills, we will strengthen the work of human resources management to ensure that personnel can continue to maintain good work enthusiasm and enhance the construction value of the safety model.

On-site safety management is one of the implementation methods of the safety management mode, and it is also the key link to truly implement the safety management work. During the construction process, professional safety supervision and management personnel should be set up to record the actual situation of the site by strengthening the whole process management of on-site construction, so that it is well documented. Once problems are discovered, they are reported in time to control the security risks in the bud and improve the ability of enterprises to resist risks. Despite this, as the engineering construction project has many problems of large construction, complicated content and inducing factors of hidden dangers, it is still necessary to establish a perfect early warning management mechanism in the process of on-site safety management. In case of potential safety hazards, immediate action is required to ensure that Its control is within the range of minimum damage.

In order to truly reduce the accident rate and implement construction safety management, effective on-site management is very important, and it is imperative to strengthen on-site management. Therefore, full-time safety supervision and management personnel should be set up at the construction site to conduct safety supervision and inspections throughout the construction process, and to record the situation on the spot in detail, so that it is well documented. If the safety hazards are found in the inspection, the safety hazards will be reported in time. Eliminate in the bud. However, there are many construction sites on the construction site, large construction work faces, many hidden problems, and very difficult supervision. Therefore, it is very necessary for on-site safety management personnel to improve the safety awareness of construction workers through effective safety education, so that they can pay more attention to safety issues. Conscientiously enforce safety regulations and raise safety issues to the level of full participation. The construction of the construction project is complicated, the equipment and process involved are highly specialized, and the safety management covers a wide range and content, so there are certain requirements for the comprehensive quality of the relevant personnel. Safety management personnel must not only have strong professional skills, but also have rich experience in safety management practices in order to carry out effective management and ensure the safety management functions.

However, many of the relevant personnel currently lack professional skills and lack practical experience, and cannot find and solve the problem of potential safety hazards in time. Therefore, the construction safety management personnel should be systematically trained to improve the comprehensive business capabilities of safety management personnel, so that they can master the professional construction safety management skills knowledge and provide human resources support for the development of high-quality construction safety management.

# 5. Conclusion

The dangers in construction engineering are high, and various levels of safety hazards are prone to occur in many aspects. As the stakeholders of the project, the owner should actively raise the emphasis on construction safety management, adopt effective safety management measures, build a targeted safety management model, fully implement safety management work, and reduce the accident rate.

# Acknowledgements

Fund Project: Heilongjiang higher education society higher education scientific research "13th five-year plan" project.

Project name:

The research and practice of network course development of construction technology in higher vocational colleges

Issue number:16G541

# References

[1] Guo Xiaohui, Yan Jing. Exploration on Construction Safety Management Mode of Construction Engineering [J]. Industry and Technology Forum, 2016, 15(24): 233-234.

[2] Yang Zhiyuan. Research on security risk and management system of Chinese construction enterprises [D]. Wuhan University of Engineering, 2014.

[3] Wang Xin. Research on construction safety management mode of building owners [D]. Huazhong University of Science and Technology, 2013.

[4] Fu Daxin, Li Xiangyang. Research on safety management system and safety production monitoring countermeasures for construction projects [D]. Hunan University, 2013.

[5] Su Yafeng. Research on safety management standardization and evaluation system of construction site [D]. Xi'an University of Architecture and Technology, 2014.