

Promoting Safety and Maintaining Health: A Documentary of the "Safety and Health Cup" of the Third Construction co., LTD of China Construction Eighth Engineering Division

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Abstract: Over the years, the three companies of China Construction Eighth Engineering Co., Ltd. have always regarded safety in production as the top priority. "Safety and production" are the leading policy of the current project. For the purpose of safeguarding safety, using the "Safety and Health Cup" competition as a means, through the competition reward and punishment mechanism to promote "everyone learns safety, everyone understands safety", build a complete safety management system, provide institutional guarantees for relevant personnel, and at the same time, other construction companies provide reference and reference.

Keywords: Safety and Health Cup Competition; Safety Management System; Safety Management Mechanism; Working Staff Management.

1. Introduction

In recent years, the safety production supervision and management system of construction enterprises in China has gradually improved, the safety production responsibility has been basically implemented, the construction technology level has been continuously improved, and the standardized protective equipment and facilities for safety production have become increasingly perfect. The two main factors leading to accidents, "unsafe state of objects", have gradually been controlled. However, "unsafe behavior of people" has always been difficult to completely avoid, especially the unsafe behavior of frontline workers, which has become the most direct trigger for accidents. According to DuPont's ten-year statistical conclusion, more than 90% of accidents are directly caused by unsafe behavior of employees [1]. With the continuous improvement of standardization, informatization, and safety technology in construction site safety facilities and equipment, unsafe human behavior has become the main cause of most safety accidents. Therefore, how to manage people is a key focus that enterprises need to control.

The Third Construction Co., Ltd. of China Construction Eighth Engineering Bureau is a wholly-owned subsidiary of China Construction Eighth Engineering Bureau Co., Ltd. It was restructured as the Third Construction Co., Ltd. of China Construction Eighth Engineering Bureau from the Second and First Corps of the People's Liberation Army Infrastructure Engineering Corps in 2007 [2-5]. Since its establishment, the company has strictly implemented the ten "zero tolerance" systems of the Bureau in safety production management. The company's leaders and relevant members have kept their job responsibilities in mind, and through the "Safety and Health Cup" competition, improve the safety management level of project managers and the safety awareness of labor team workers, create a safe and healthy working environment, and truly achieve "promoting safety and ensuring health".

The "Safety and Health Cup" competition, as the name suggests, refers to the "Safety and Health Cup" competition. It aims to promote the construction of enterprise safety and health culture and ensure safety production work by examining indicators such as organizational leadership, safety management[6], labor protection and occupational health, and employee safety production knowledge and level. It aims to improve the safety awareness of employees and labor team members, reduce unsafe factors, eliminate safety hazards during construction, and reduce the incidence of occupational diseases and safety accidents.

According to relevant documents and regulations in China, China Construction Eighth Engineering Division Third Company, in accordance with the Notice on Carrying out "Safety and Health Cup" Competition Activities in Different Years issued by the All China Federation of Trade Unions, China State Construction Engineering Group Co., Ltd., and China Construction Eighth Engineering Division, in order to implement the safety management concept of "respecting life, safeguarding safety, attaching equal importance to supervision, and fulfilling responsibilities" in the activities, further promote the standardization of safety management and safety management processes for all employees, play a guiding role in positive incentives, identify safety hazards on the construction site[7-10], effectively promote safety production work and prevent safety accidents, ensure the construction safety and physical and mental health of employees, formulate and implement "Safety and Health Cup" activity plans that are in line with the actual safety production situation of the company, and ensure that every worker can effectively improve their safety awareness.

2. Establish the Concept of Safe Development and Ensure the Implementation of the "Safety and Health Cup" Activity

Firmly establish the concept of safe development, implement the "Safety and Health Cup" activity, and enhance safety awareness. The company has communicated notices from the All China Federation of Trade Unions, provincial trade unions, and other organizations regarding the "Safety and Health Cup" event, and developed a "Safety and Health Cup" competition that is in line with the actual production needs and on-site conditions. In order to ensure the comprehensive development of the "Safety and Health Cup" competition to the greatest extent possible, the company has taken targeted measures to promote the awareness of employees and operators of the "Safety and Health Cup" competition and improve their safety awareness through various forms such as television, radio, internet, PPT presentations, safety exams, and safety education and training during national special occasions such as National Safety Month; Organize activities such as "Project Manager Talks about Safety" and "Be a Safety Officer for a Day". Through project managers taking the lead in learning, safety education, and personal experience, everyone can understand the importance of safety production and consolidate the concept of safety production and safety development; Incorporate the "Safety and Health Cup" competition into the reward and punishment mechanism. The project department will collect monthly statistics on the activities of each work area or subcontracted team, reward work areas and teams that are carried out in advance or in a timely manner, punish work areas and teams that are not carried out, and use material and praise methods to improve the enthusiasm for carrying out the "Safety and Health Cup" competition.

The Safety and Health Cup competition organizes and mobilizes employees to actively participate in hidden danger investigation and management activities through competitions, to investigate and supervise the rectification of accident hidden dangers, promote the implementation of major hidden danger rectification responsibilities, funds, and monitoring measures, effectively reduce on-site safety hazards, steadily improve the safety awareness level of workers, and fundamentally change the current situation of existing personnel not understanding safety and ignoring safety.

Figure 1 shows the current status of the Safety and Health Cup activity in the civil engineering area of the DS6-TA02 bid of the Nanjing Jurong urban rail transit construction general contracting project of China Construction Eighth Engineering Bureau Third Construction Co., Ltd. Through different forms, such as each operator reading a safety production knowledge book and the project manager giving a safety lesson, the focus is on improving the theoretical knowledge level of the operators and equipping them with a certain theoretical knowledge foundation; By conducting safety knowledge training and other activities, common safety hazards on site are explained to enable operators to have the basic ability to identify hazards, effectively identify sources of danger, reduce the incidence of safety accidents, and effectively ensure the safety and physical health of operators.



Figure 1. Implementation of the "Safety and Health Cup" Campaign

3. Establish a Sound Safety Management Mechanism and Improve the "Safety and Health Cup" Competition

Establish a sound company and project safety management mechanism, and effectively improve the "Safety and Health Cup" competition. The company establishes a safety production supervision and management department to supervise and inspect the safety production situation of each project. The project department sets up a safety department to conduct safety inspections on each work area or subcontracting team of the project. Each work area or subcontracting team sets up a full-time safety officer position to achieve safety connectivity between different levels; Secondly, the "Occupational Health and Safety Production Management Manual" has been formulated to promote enterprises to clarify the safety production responsibilities of all levels and types of employees in accordance with safety production laws, regulations, and relevant standards. Through strengthening education and training, enhancing management assessment, and strict rewards and punishments, a work system of "layer by layer responsibility, everyone's responsibility, and each person's responsibility" has been established for safety production work; Promote the establishment and improvement of education and training archives and safety production responsibility system management and assessment system, assess and manage the implementation of the safety production responsibility system for all employees, improve incentive and restraint mechanisms, and stimulate the enthusiasm and initiative of all employees to participate in safety production work; Strengthen the guidance, supervision, and inspection of the establishment and implementation of the full staff safety production responsibility system in enterprises, and promote the effective implementation of enterprise safety production.

In order to improve the competition of the "Safety and Health Cup" activity, by refining the understanding of the content of the "Safety and Health Cup" activity competition and focusing on implementing the content of the activity, the "Safety and Health Cup" activity competition is now divided

into three parts: comparison management. Conduct spot checks on the safety education situation of each work area or subcontracting team, strengthen the safety awareness of the team leader as the first responsible person in the operation process, decompose indicators and implement tasks in the team, formulate and implement practical and feasible management measures, commend teams with good management and personnel education effects, and punish teams that have dealt with problems; Compared to supervision. According to the ten "zero tolerance" system of the bureau, special spot checks will be conducted on on-site management, mechanical equipment, etc., and a safety supervision mechanism will be established. While safety engineers manage the site, operators can achieve self supervision and enrich the inspection and supervision work of the masses; Emphasize both supervision and regulation. Clarify the two systems and related responsibilities of safety production management and safety production supervision. It is necessary to achieve a relative separation of "supervision" and "management", clarify responsibilities, and achieve organic unity to form a joint force.

On the basis of ensuring the normal operation of the Safety and Health Cup competition, China Construction Eighth Engineering Division drew on international advanced safety production management experience, actively explored innovation, and carried out the "Behavior Safety Star" activity with positive incentives in grassroots production units, significantly improving the safety awareness of frontline workers and effectively solving the "last foot" problem that may lead to safety production accidents. Frontline workers have gradually shifted from passive safety to active safety, with a significant reduction in violations and safety production accidents. Three companies enriched their activities in the Safety and Health Cup competition through the Behavior Safety Star activity. According to the monthly "Behavior Safety Star" reward exchange table, the labor service administrators of each project will receive the title of "Behavior Safety Star" for the construction site based on the top three points card arrays obtained each month. And at the monthly education meeting on the 22nd of each month, a cash reward of "Behavior Safety Star" with the highest number of points cards will be given (for those who have obtained the same number of points cards, the rewards will be tied). In order to continuously promote the "Behavior Safety Star" activity, quarterly and annual "Behavior Safety Stars" are specially set up, with large bonuses distributed to greatly improve the enthusiasm of operators.

4. Reflection and Summary, Strengthening the Effect of the "Safety and Health Cup" Activity

The launch of the "Safety and Health Cup" activity competition has strengthened the safety awareness of employees, improved the safety enthusiasm of company employees and workers, and fundamentally changed the current situation of "heavy production, light safety". However, there are still some personnel who do not attach importance to safety and do not obey supervision. Therefore, in response to this situation, the following suggestions are proposed:

(1) Strengthen safety education and training for homework personnel

In order to further enhance the safety awareness of workers, consolidate their safety job responsibilities, and improve the

skills and theoretical foundation of different types of workers, the three companies have established a safety training system. The project department must conduct a large-scale safety education and training once a week, through case explanations, accident replays, and detailed explanations of relevant safety technical specifications, so that participants can apply what they have learned and reduce the occurrence of safety accidents[11]; Strictly implement safety education and safety technical disclosure for employees upon entry

Especially for special operation personnel, their work ability should be evaluated with complete documents, and those who fail should be advised to leave the site; For personnel in the company, actively learn about the safety production system of the bureau, participate in monthly safety exams, promptly report and criticize those who fail, and retake the exam until they pass[12-13].

(2) Systematic security management

Systematic safety management is mainly reflected in the comprehensive, whole process, and all staff management of engineering project safety issues, including project safety assessment, improvement, monitoring, early warning, accident handling, and post evaluation. In terms of on-site construction, it is necessary to strengthen the joint supervision and inspection of the owners, supervision units, and construction units, improve the level of safety awareness, evaluate various systems and plans, and use accident tree or comprehensive fuzzy evaluation methods to conduct safety evaluations based on the problems and solutions on site, in order to understand the rules of accident occurrence. In response to the actual problems on site, the three companies use a series of inspection systems such as project leaders leading inspections and company leaders conducting special inspections to estimate and predict the actual safety production situation on the construction site, and establish a sound emergency rescue management mechanism to prevent accidents before they occur.

(3) Intelligent security management

In response to various issues such as multiple projects and high employee traffic, the three companies have implemented intelligent and standardized management of construction sites through intelligent data management modules. By combining digital information systems such as Guanglian Da with on-site reality, they have created a smart construction site management model that integrates AI monitoring system, employee naming system, fire extinguishing experience system, and virtual reality VR technology[14-16]. Not only can the company monitor and monitor at any time, but the project department also saves a lot of manpower, improves efficiency and project progress, and creates a technology led building safety management platform.

Guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, we conscientiously implement General Secretary Xi Jinping's important speeches on safety production and occupational disease prevention and control, resolutely implement the decisions and deployments of the Party Central Committee and the State Council, adhere to the people-centered approach, firmly establish the concept of safety development, vigorously promote the idea of putting life first and safety first, and have always focused on preventing production safety accidents. We urge enterprises to implement the main responsibility and the responsibility system for safety production of all employees, widely organize and carry out mass safety production and occupational health activities, solidly promote the

construction of enterprise safety culture, strive to improve the level of enterprise safety production and occupational disease prevention and control work, and effectively safeguard the labor safety and health rights and interests of the vast number of employees.

5. Conclusion

Safety has no endpoint, only a starting point, and safety production is always on the road. Based on relevant national laws, industry norms, and common safety hazards on site, the three companies have used safety competitions to improve the safety awareness level of project management and operation personnel. They have put into practice the company's core safety concept of respecting life, safeguarding safety, emphasizing supervision, and fulfilling responsibilities through practical actions, providing new methods and ideas for safety education for other enterprises in the construction industry.

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