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# On the Existing Problems and Countermeasures in the Current Construction Process

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**Abstract:** Since the reform and opening-up, China has followed the strategic development policy of in-depth research, analyzed various problems that construction enterprises need to cope with in the process of reform, development and changes, and gradually accelerated the pace of reform and opening-up with advanced science and technology. The construction industry is crucial in everyone's life and serves as a basis for our survival. It is mainly divided into two categories: industrial construction and civil construction. With the development of the economy and the continuous improvement of science and technology, the construction industry has undergone significant changes compared with the past. For example, construction materials, architectural styles, and construction quality have all been greatly improved. In industrial construction, factory buildings or sites are the foundation of industrial production. In civil construction, buildings are the basic guarantee for residents to live and work in peace and contentment. Therefore, we should attach sufficient importance to the construction industry. Some people say that the construction industry is an evergreen industry, but many problems arising in the current construction process have to arouse the thinking of the construction industry. Based on these construction problems, we should study reasonable solutions to improve the handling process in current construction.

**Keywords:** Safety accidents; Construction management; Environmental protection issues; Market system; Technical requirements

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## 1. Introduction

With the rapid development of China's economy and the continuous advancement of urbanization, the construction industry has become increasingly important in the national economy. However, alongside this rapid development, numerous issues have emerged during the construction process, which have seriously affected project quality and the industry's image. This study aims to conduct an in-depth analysis of the main problems existing in the current construction process and propose practical solutions to promote the healthy and sustainable development of the construction industry.

Construction management is a key link in ensuring the smooth completion of engineering projects, involving multiple aspects such as quality, safety, progress, and cost. Effective construction management can not only improve project efficiency but also reduce risks and protect the interests of all parties. Therefore, researching the problems existing in the construction process and their countermeasures has important theoretical and practical significance. This article will conduct in-depth discussions from the aspects of construction quality, safety, progress, cost management, and

environmental protection, in order to provide valuable references for the improvement and development of the construction industry.

## 2. Problems in construction management

### 2.1. Inadequate safety management

In management work, the responsibility for safe production at construction sites is unclear. Construction safety management is an issue that urgently needs to be addressed. Although the state and the industry have formulated strict safety regulations, safety accidents still occur from time to time in the actual construction process. This is mainly attributed to factors such as weak safety awareness, inadequate safety measures, and insufficient safety training. Accidents such as falls from heights, mechanical injuries, and electric shocks still occur frequently, seriously threatening the lives of construction workers.

### 2.2. Imperfect construction market management system

The management system of the construction market plays an important role, but in reality, this aspect is not perfect. This is mainly reflected in the following: during construction, emphasis is placed on quality while neglecting safety; projects are won with the lowest price. The existence of these problems results in insufficient funds to ensure safe and civilized construction, and even no special safety management funds. The serious lack of safety production equipment, materials, and tools makes the construction site chaotic[1]. At the same time, some safety supervisors only pay attention to external superficial phenomena, conduct superficial safety inspections, and do not go deep to gain a better understanding of the status of safe production. As a result, the supervision intensity is greatly reduced, and even emotional factors are involved, which seriously affects the exertion of supervision intensity and makes supervision a mere formality.

### 2.3. Unscientific site layout and management

During the construction process, the on-site layout must be rationally arranged in accordance with the construction design plan, and full enclosed project management should be implemented. Stable enclosures should be built using steel plates, bricks, and hollow blocks to ensure their stability. The on-site drainage system must be kept unobstructed. Construction materials and tools should be stored scientifically according to the overall layout plan, with clear signs set up. Construction and domestic waste should be stored and transported in a timely manner[2]. Hazardous materials such as flammable, harmful, and explosive items on the construction site must be managed scientifically. Fire-fighting equipment should meet fire safety standards, and obvious safety signs should be placed at dangerous passage entrances and key locations[3]. Living and office areas must be separated from the construction site by a safe distance. Temporary prefabricated houses should not exceed three floors, and employee dormitories should be uniformly arranged. It is advisable not to accommodate people in kitchens, work areas, or power distribution rooms. In addition, simple canteens, toilets, and bathrooms should have stable structures. However, in actual construction sites, some workplaces fail to meet the above standards. Relevant responsible personnel often neglect the management and layout of the construction site, leading to accidents such as fires and personnel poisoning.

### 2.4. Environmental pollution issues

Environmental pollution in construction projects mainly includes noise pollution, mud pollution, dust and solid suspended matter pollution, harm to the surrounding environment caused by foundation pit excavation, light pollution, and pollution from solid waste. Among them, noise is the most intense and common problem reported by residents during construction. Mud pollution, dust and solid suspended matter pollution, harm to the surrounding environment from foundation pit excavation, and pollution from solid waste are relatively traditional types of pollution. Light pollution, however, is a problem put forward in recent years. Light pollution in urban construction mainly comes from the reflection of decorative

materials such as glazed tiles, polished marble, coatings on building surfaces, especially glass curtain walls. The arc light emitted during electric arc welding or flash butt welding in construction is also an important source of pollution. Strong reflections and electric arcs can sting the eyes, cause visual disturbances, and even lead to traffic accidents[4]. At the same time, these are also important sources of fires at construction sites.

### 2.5. Overly lax technical requirements

In the process of building construction, a larger number of grass-roots workers are needed. If managers have low requirements for operational skills, it will lead to many problems among grass-roots construction workers during their work, such as weak technical capabilities, operational errors, and unclear understanding of construction requirements. Being overly lenient with technical requirements results in lax management, leading to many construction situations that violate regulations. This not only reduces the efficiency of building construction but also significantly impairs the quality of the construction project.

## 3. Countermeasures for construction management

### 3.1. Improving the comprehensive quality of personnel

For new employees, enterprises should attach importance to safety education, enabling them to understand the performance and usage methods of machinery and equipment as well as safety protection measures, and be familiar with the safety operation procedures related to their own work. They should have a clear understanding of the links where accidents are prone to occur and be able to carry out effective prevention and key supervision[5]. For special operation personnel, in addition to safety education, they must receive special operation training in accordance with regulations and obtain work permits before taking up their posts.

### 3.2. Coordinating management among different professions

To fundamentally ensure the quality level of buildings, solve technical and human resource problems in construction, it is necessary to formulate a reasonable and scientific construction management system, thereby improving the management level of construction. In terms of technical coordination, efforts should be made to reduce its cumbersomeness and improve the quality of architectural engineering drawings, so as to reduce losses caused by technical errors. The design of drawings involves coordination among different professions. Therefore, in order to ensure the coordination and unity between designers and other personnel, it is necessary to strengthen the inspection of drawing designs, identify deficiencies, and correct them. During construction, technical disclosure should be done well to ensure that construction personnel can clearly understand the connotation of the drawings and the design links, thereby reducing errors in construction. In terms of management coordination, unity should be achieved to avoid the situation of multiple management. Therefore, in the coordination of construction management, attention should be paid to technical coordination, and relevant management regulations should be established[6]. By improving management in construction, the coordination between the work of different responsibilities and departments can be promoted, so as to ensure that different staff can clearly understand the construction procedures and technical requirements of the drawings, enabling all aspects to carry out overall construction and meet the quality standards of each construction point. Through coordinating the management among different professions, the management in construction can be improved, and the efficiency of construction management can be enhanced.

### 3.3. Improving construction technology management

To ensure the smooth progress of construction projects, it is essential to continuously improve and refine the management of construction technology. Firstly, there must be qualified technical personnel, excellent skilled workers, and a sound, stable technical command and operation system. Additionally, professional mechanical equipment, design drawings with

instructions, standardized scientific processes, and technical requirements with detailed standards should be available, along with strict and effective construction technology management systems and post responsibility systems. Secondly, all preparatory work before construction should be well done, and various fixed procedures, supervision, and inspection work should be strictly implemented. Thirdly, for construction personnel, they must fully grasp the construction requirements specified in the design drawings before construction, study the construction drawings, and participate in joint reviews of the drawings. The contractor and subcontractors should review and negotiate on any issues arising from the design drawings to ensure the smooth implementation of the project. Finally, efforts to manage technical archives should be strengthened. Professional personnel should be assigned to properly record project completion drawings, design changes, project acceptance records, quality accident handling, settlement observations, etc., and promptly submit them to relevant departments for filing and registration.

### 3.4. Promoting Green Construction

Green construction technology is not a new concept in engineering construction. Reducing construction noise, minimizing disturbances to residents, and cutting down material waste are already priorities in most construction sites. However, the key application of sustainable development ideas in engineering construction lies in integrating the “green approach” as a whole into the construction process and implementing green construction, so as to minimize the impact on the environment and resources during the construction phase. Green construction is a major manifestation of the application of sustainable development ideas in engineering construction and a comprehensive application of green construction technologies. It involves various aspects of sustainable development, such as ecological and environmental protection, resource and energy utilization, and social and economic development. The implementation of green construction should follow certain principles, including reducing site interference, respecting the base environment, constructing in accordance with climate conditions, saving resources (energy), reducing environmental pollution, implementing scientific management, and ensuring construction quality.

## 4. Conclusion

In conclusion, in the construction of architectural projects, the management of construction quality standards is a massive system that involves workers in every construction link of the project. Due to the extremely long construction cycle of buildings and the fact that construction is simultaneously affected by natural conditions, the management of construction becomes very difficult. Therefore, good construction management is the guarantee of the building’s quality standards. Hence, it is essential to do a good job in construction management, improve the management efficiency of construction, and thereby ensure the quality of the project.

## Disclosure statement

The author declares no conflict of interest.

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