

## **Summary of Rapid Construction Mode of International Engineering Projects of China Construction Seventh Engineering Bureau Co. LTD**

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**Abstract:** After joining the Seventh Bureau of China Construction, in the construction of daily engineering projects, I have always required myself to be able to use the technical standards and specifications of construction engineering to solve various problems and problems in the construction process and after many years of experience. I have accumulation of practical work experience and can take the best processing measures for the surrounding safety management according to the construction site environment and gradually develop a rigorous work habit. Therefore, this project mainly summarizes the experience I had combined with the rapid Construction Mode of International Engineering Projects of China Construction Seventh Engineering Bureau Co. LTD.

### **1. The Achievement of Rapid Construction Mode of International Engineering Projects of China Construction Seventh Engineering Bureau Co. LTD**

During the construction of this international project, our party strictly abides by the local laws and regulations and construction technical standards. Before the project construction, strict education and training were carried out for the construction personnel so as to enhance their awareness of production safety. After formal construction begins, we take the lead to seal the top, main body then, next indoor plastering, outside frame of doors and windows, coating already were finished completely. Indoor elevator installation is completed, indoor toilet waterproof construction is completed, pipe network, road, wall, landscape, green synchronous construction is completed. At present, the project is progressing smoothly without any delay. According to the actual construction period, the project is finished one month ahead as stipulated in the contract.

In responsible for the construction of the project, I'm under a lot of stress. In order to ensure the safe and stable operation of the project, I take the bull by the horns, timely and effectively communicate with colleagues, do well in coordination with all aspects to develop a timetable, ensure the completion of the construction task according to the actual engineering progress and receive the leadership and colleagues' consistent high praise.

### **2. Effective measures of International Engineering Projects of China Construction Seventh Engineering Bureau Co. LTD**

#### **2.1 Set up a commando**

In the process of the project construction, fast construction mainly uses a single project as a pilot to conduct a comprehensive and reasonable planning. Combining with previous work experience, the innovation of the traditional management mode, establishment of construction commando and a high level of technical personnel, problems have been solved comprehensively in the actual production process. Setting up corresponding board effectively has improved the quality of construction and speed up the construction progress. Once the construction quality and construction progress cannot meet the requirements of the set goal, the management staff would warn so as to create a great construction environment.

## **2.2 Make Perfect Construction Schedule**

According to the construction contract, the project department shall organize the construction period for all construction personnel in a scientific and reasonable way to ensure the smooth completion of the whole goal, and then formulate corresponding construction period management measures. In the construction process, the project shall adopt the manager responsibility mechanism, conduct unified organization, coordination and command of the engineering construction process, strengthen the supervision of the entire construction process, ensure the execution and prohibition, and strictly abide by the contract provisions. The project engineering management department establishes the dispatching center to determine the quality standard of the sub-project and sub-project, control the key routes, gradually discover the existing problems, and carry out regular inspections, so as to achieve the established project schedule. In the process of project construction schedule management, the project department carries out strict inspection on the implementation of the construction plan. When the schedule falls behind, corresponding optimization and adjustment should be carried out to timely find and solve problems and rectify the construction schedule. In the process of rapid construction of this project, there are many construction technical difficulties. Therefore, the project department employs experts to provide technical support to constantly solve difficulties in the project construction, and effectively ensure the construction progress. The project department constantly strengthens the cooperation and coordination of all parties, seriously summarizes the problems and contradictions in the construction process and creates good construction conditions for the whole construction process. For example, three units in a building are built at the same time, and the fastest could be 6 days a floor. Due to the expansion joints separate construction, the speed can reach to 4 days and a half a floor.

## **2.3 Establish a Professional Working Team**

According to the characteristics of the project construction, engineering, project department set up a professional construction team, in strict accordance with the requirements of the construction organization design for scientific and reasonable construction to guarantee management strength and workforce quality at the construction site meet the requirements of engineering construction technology. In the process of construction, shift construction and open working measures are mainly adopted. For example, due to the proper construction organization, the garage part is relatively fast, basement construction is finished half a month ahead of schedule. In the process of selecting the construction team, the project department selected an experienced construction team through comprehensive comparison. Prior to the commencement of construction, the construction personnel shall be mobilized, and the construction preparations shall be made. Besides, the key links and steps of construction shall be inspected. However, from the perspective of actual construction, for example, due to the poor overall construction level of some small construction teams, the construction period was delayed after several shifts.

## **2.4 Equip with corresponding construction machinery**

The project department has made a complete material demand plan according to the situation of the construction site. For example, it has made a comprehensive procurement preparation for the steel needed for the project. After the official start of the project, it has signed a contract with local suppliers, improved the original procedures and ensured sufficient supply of goods. On the premise of ensuring the quality of concrete, the concrete station close to the project is selected as the main supplier through optimization and comparison, so as to ensure the smooth progress of the project. The water used for construction is mainly local municipal water. In order to ensure the safety and quality of water supply, the project chooses the mode of water tank and water truck transportation.

## **2.5 Summary of Construction Technology**

First is the housing template construction technology. In the construction process of building formwork, the whole process mainly includes: axis casting -- column formwork installation -- elevation control point setting -- beam plate formwork installation on the second floor -- wire pipe

embedded acceptance. After completing each process, we do a good job in inspection before the next construction. In this process, it is necessary to define different construction procedures, do a good job in the construction of steel pipes and fasteners, maintain sufficient stiffness and strength, and improve the service life of framework projects. In the process of checking the framework of house construction project, it is necessary to focus on the flatness and the street situation to ensure the beautiful appearance of the structure. In the process of column installation and construction, it is necessary to smooth the cement mortar, do a good job in pier positioning and improve the accuracy of elevation and column axis boundary line to prevent displacement.

Second is concrete construction technology. Concrete construction technology is a very key technology in housing construction. In order to ensure the quality of the project, the construction unit should ensure the accuracy of the concrete mix ratio. In the specific construction process, it is necessary to use high-quality sand and stone and cement, and then into a certain amount of expansion agent and water reducer. The proportion of concrete is the key in the construction of the whole house construction project. With the continuous improvement of the construction technology level of building engineering, the construction technology level of high-performance concrete has been continuously improved, effectively avoiding the cracking problem. At the same time, the prestressed concrete technology has been well developed. The use of prestressed concrete can reduce the construction difficulty, reduce the building load, and ensure the construction quality and performance.

Third is the housing leakage problem. The problem of house leakage is caused by many factors. The performance of construction materials, site management mechanism, construction technology level and construction maintenance technology can affect the construction quality. In the process of concrete engineering construction, the comprehensive quality of the construction personnel is relatively low. In the process of building construction, there is no advanced management mechanism, but relying on the construction experience to carry out the construction, therefore, the construction quality is reduced, resulting in the leakage of the house. Affected by the plasticity of concrete, resulting in concrete cracks, relatively large concrete slump and subsidence increase the probability of concrete cracks. In the process of framework binding, the framework appears settlement problem or movement problem, and thus cracks appear. At the same time, after the completion of concrete pouring, affected by the plastic performance of concrete and the rapid evaporation of water, concrete shrinkage cracks.

## **2.6 Adopt information-applied management**

In order to improve the construction efficiency, the project is set up to the automatic information management system to realize the network connection with other construction departments to improve the automation level of management, the progress quality materials, equipment and other information through the network fast transmission for optimizing the site resource allocation that provides a good reference for the construction progress of the project, the project department adopts the method of dynamic management to establish a perfect scheduling network and mainly uses the method of vertical management to minimize the intermediate links which fully grasp the construction progress and timely and also effectively deal with the problems that is existing in the construction. We have conducted a comprehensive and reasonable study on the behavior of cross construction and serious interference to the construction schedule that formulate the corresponding and preventive measures that will timely adjust the production factors and ensures the establishment of the project.

Under the premise of the current rapid development of social economy, construction industry has developed rapidly and building materials are used in order to adapt to the new situation of social and economic development, furthermore, I will have to study the development trend of construction industry combining with working practice and constantly expand my own aspect of knowledge in the use of scientific theory and knowledge to solve practical problems and be able to create more economic benefits for the unit as a whole.

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