Discussion on Construction Management and Progress Control of Building Engineering

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Abstract: As the number and scale of construction projects in China continue to increase, the construction period is required to become shorter and shorter. The progress control of construction projects, as an important part of project management, will directly determine whether the project itself can be successfully constructed, which is related to the construction unit's Reputation and benefits. Effective control of engineering progress is an important guarantee for improving the management level of engineering projects, saving engineering investment costs, and shortening the construction cycle. The level of project progress control is directly related to the efficiency and cost control level of the construction unit. To achieve the progress control target, the project needs to establish an effective control system to ensure it, take reliable measures, cultivate a project culture that is consistent with the actual project, and improve management. Executive power. Therefore, the exploration and research of construction progress control of construction projects is of great significance to both the construction unit and the construction unit.

1. Introduction

The construction management of a construction project refers to the application of various measures by the construction unit to ensure the construction quality of the project according to the construction plan and requirements; and the construction progress control of the construction project refers to the analysis of the current construction progress and construction plan by the construction unit and guarantees The implementation of the construction progress is in accordance with the construction plan and the application of various measures is implemented. The construction management and schedule control of construction projects include many aspects, which mainly include the project's expected construction progress, construction plan, actual construction situation, and the current construction situation of the project, etc. The management and control method mainly includes analysis of the actual progress Reasons for deviations from the construction plan, taking targeted measures based on the reasons, and using project engineering software for management.

The construction management and schedule control of a construction project involve a lot of content. Therefore, it is also affected by many factors, as follows: Personal factors. No matter it is the construction, management or overall construction of a construction project, it is done by people. The professional knowledge and skill level of personnel directly affect the construction progress and management efficiency of the entire project. Material factors. Materials are the foundation of construction engineering construction. The quality of materials, whether they are consistent with construction requirements, whether they can arrive on time, etc., all affect the construction management and schedule control of construction engineering to a certain extent. Equipment factors. Mechanical equipment is an important tool for construction projects. Whether the selection of mechanical equipment is consistent with the construction requirements, whether the configuration is reasonable, and whether it can ensure normal operation, will affect the construction progress of the construction project. ④ Funding factors. Funds are the guarantee for the smooth construction of construction projects. Insufficient funds or inflexible turnover will seriously affect the construction progress. Factors of construction conditions. The construction project also has certain requirements for the construction conditions. If the construction site has poor geology, or the local climate

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changes, and the surrounding environment of the project is poor, it will affect the construction progress of the construction project. Construction technical factors. The application of construction technology is conducive to the smooth progress of the construction, and will also improve the construction quality of the construction project to a certain extent. If the construction technology used in the construction process is improper, or the construction staff does not operate in accordance with relevant specifications and technical standards, Affect the application effect of construction technology, and also affect the construction progress of the project.

2. Construction Project Progress Control Method

The key measures adopted for construction project schedule control are organizational, technical, contract, economic and information management measures. Organizational measures mainly refer to establishing and improving progress control systems and mechanisms, clarifying the responsibilities and control points of management personnel at all levels, clear division of labor, and decomposing control goals step by step through the project management level, and clarifying reward and punishment measures; while improving information on the progress control system The feedback system analyzes and predicts the influencing factors in the progress management process, establishes a work management system for the progress management, and can monitor the implementation of the progress through coordination meetings and information reporting mechanisms. Xi'an Qujiang International Conference Center project has prepared a project management plan, a project business management plan, a project quality plan, a project construction plan, and a project progress management plan. Hierarchical project management responsibilities of control personnel, and clarify the control responsibilities to quantified assessment. In addition, the project also compiles the project management system in accordance with the requirements of the company and the managerial department, and compiles a targeted management system for general contract management, technical management, safe and civilized construction management, business management, and material management, clarifies the management process, and establishes management. The control target responsibility control system lays a solid foundation for the smooth construction of the project.

The technical measures are mainly to adopt the technical method of accelerating the construction progress, to implement the deployment of the construction plan, and to use the “top ten new technologies” as far as possible or to adjust the logical relationship between the construction procedures in order to achieve the most reasonable process and the optimal process. In addition, the construction plan is optimized to shorten the duration and speed up the construction progress. Xi'an Qujiang International Conference Center's project technology management adheres to the management principle of “the plan goes ahead, the delivery is first, the review is over, and the model guides the way”, and the project technology management goals are defined, that is, the establishment of the China State Construction Corporation Science and Technology Demonstration Project, China Construction Third Bureau, or Two provincial-level construction methods, four small-scale achievements and three QC activity achievements. First, clarify the technical management goals and point out the direction for project technology management. Second, make provisions for technology efficiency and two or three operations to urge managers to pay attention to the application of “top ten” technologies in the construction process, while strengthening technology The enthusiasm of the staff to actively create efficiency, so as to achieve the purpose of technology to promote production, technical service production, and technology to create benefits. Finally, the project technical department carried out technical work around the key points of process reduction and exemption and process optimization to provide a reliable guarantee for project progress guarantee. For example, the “semi-inverse construction method” for the construction of the three-story truss box girder of the project is carried out from the aspect of process optimization, which not only shortens the construction period, but also saves project cost investment.

3. Measures to Strengthen Construction Management and Progress Control of Construction Projects

The formulation of the construction plan is the basis for good construction progress control. A scientific and reasonable construction plan is the guarantee that the construction of the construction project can be completed on time. If the plan is not formulated reasonably, the subsequent work will not be carried out smoothly. For this reason, before the construction project starts, the construction unit must make the construction plan well to ensure the scientificity and rationality of the construction plan. At the same time, other plans are formulated around the construction plan, including plans for personnel requirements, construction materials, machinery and equipment, quality control, safety and environmental protection, and funding, to ensure the smooth progress of the overall construction project. In addition, in the actual construction process, we must also pay attention to advancing the construction progress. If the actual construction fails to keep up with the schedule, we should analyze the cause in time and take effective measures to make up for it to ensure the construction progress of the construction project. It can proceed as originally planned.

The construction of a construction project is the process of using various resources for processing and production. In actual construction, if any one of the resources is insufficient, it will affect the construction progress of the construction project. Therefore, during the construction process, personnel, materials and technology should be reasonably arranged to provide basic guarantee for the construction of the project. On the one hand, before construction, the construction unit should organize the construction staff, technical staff and management personnel to read the construction contract, construction design drawings and other documents and information in detail, understand the corresponding construction standards, and be familiar with various construction methods, and carefully check At the construction site, ensure that the actual situation at the construction site is consistent with the construction design. On the other hand, the construction unit should purchase a sufficient amount of construction materials and machinery and equipment required by the construction requirements according to the construction plan and schedule, strictly select suppliers of construction materials and machinery and equipment, and ensure the quality of the selected construction materials and machinery and equipment And security. In addition, before construction, the inspection of construction equipment should be done to ensure that the equipment is in a normal state and can operate safely, and eliminate negative factors that affect the construction progress as much as possible.

Personnel are the new force in construction and management of construction projects. The consciousness of construction management and progress control of management personnel greatly affects the level and effectiveness of construction management and progress control. Therefore, in actual work, if you want to improve the level of construction management and progress control of construction projects, it is necessary to strengthen the management and control awareness of construction managers. On the one hand, it is necessary to strengthen the education and training of relevant management personnel to enrich their management theoretical knowledge and improve their management skills; on the other hand, various publicity methods can be adopted to strengthen the publicity of construction management and schedule control, which is imperceptible. The employees are made aware of the importance of construction management and schedule control, so that they can consciously act in accordance with relevant specifications and schedules in the work, ensure that the project can be completed on time, and ensure the quality of construction. In addition, a multi-level management and control system should be formulated to clarify the responsibilities of all parties in project construction management and progress control, and set up special personnel to implement dynamic control of the construction schedule, and timely find out situations that may cause schedule delays, and Relevant parties are convened to discuss and solve the problem in time to control the progress of the project within the construction plan.

In the actual construction process, affected by various factors, especially natural factors, such as geology, climate, hydrology, etc. These uncontrollable factors often cause the construction of the construction project to fail to follow the original construction plan and cause construction. Delayed.

For this reason, during the construction process, if the actual construction progress is found to deviate from the construction plan, the cause should be analyzed immediately and corrected, and the construction plan should be adjusted in time to avoid affecting the development of subsequent construction procedures. The construction order is chaotic and affects the construction progress. In addition, because the construction quality will also affect the progress control of the construction to a certain extent, if there is a quality problem in the construction of the project, it will have to stop work for rectification, which will cause delays in construction progress. Therefore, in the actual construction process, the construction quality should also be strictly controlled. On the one hand, it is necessary to strictly control the quality of various materials, mechanical equipment and production processes used in construction. Before the construction, we must have a thorough technical understanding and let all employees clearly understand the construction goals, plans and standards of the project.

4. Conclusion

The control of construction progress is a systematic control process. During the control process, the following principles are followed: first, to ensure the primary requirements of project quality, and not to unilaterally pursue the acceleration of construction progress; second, to ensure construction safety, and schedule of construction progress requires Balanced and orderly to ensure the personal safety of the operators; thirdly, to take reasonable measures to speed up the construction progress, such as the adoption of new technologies and new materials, the optimization of the plan to achieve the effect of shortening the construction period, and the reasonable arrangement and reasonable procedures Interspersed to shorten the construction period, we can not imagine to shorten the construction progress. The fourth is to establish a reliable schedule management system, to speed up the construction progress through system requirements and clarification of their respective management responsibilities, and supporting incentive measures. Only on the basis of adherence to the principles can we consider issues such as accelerated schedules and even cost optimization. Realize subjective progress management of construction projects. As a plan, the construction schedule must have missed influencing factors. On-site management staff must strengthen on-site monitoring and management, and constantly summarize new situations, new influencing factors, and continuously analyze interference factors, so that the schedule can be continuously developed. Perfect to make it more consistent with the construction situation on site. Only by constantly comparing actual progress with planned progress, continuous analysis and adjustment, can we find out the influencing factors, and provide technical guarantee, organizational measures, and economic measures to provide guarantees for construction progress management goals.

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