Research on Prevention of Common Quality Problems in Prefabricated Construction Based on Computer

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Abstract. With the rapid development of the times, China’s social economy is showing a trend of rapid and stable development, people’s living standards are constantly improving, and various industries are developing rapidly. The construction industry has always been an important pillar of China’s economic development. The number of prefabricated construction projects is increasing, although a lot of manpower, material and financial resources have been invested in the specific construction process, but there are still some quality problems. A large number of quality problems will affect the final quality of the entire construction project, causing the construction project to not be put into use normally. On the basis of computer big data, this article starts with the common quality problems in prefabricated building construction, and proposes corresponding preventive measures for some existing quality problems.

Keywords: Assembly Type, Construction, Quality Problem, Prevention, Research

1. Introduction

The reason why assembly architecture can be developed rapidly is that assembly architecture has many advantages, the most important of which is very environmental protection, and the construction efficiency of the whole assembly building is very fast, which makes people pay more and more attention to the development of assembly architecture. At present, the relevant researchers continue to optimize and improve the construction technology of the assembly building, in the specific construction process, there are still some quality problems, the relevant departments should fully study the current problems in the construction process, and solve the problems scientifically and effectively, so as to effectively ensure the construction quality of the whole assembly building. So as to promote the construction industry in China to get more rapid development [1].

2. Common quality problems in assembly building construction

2.1. Quality problems in flat plate making and installation

At present, the most common construction quality problems of assembled buildings are divided into three categories, namely, the quality problems existing in the manufacture and installation of flat plates, the quality problems existing in the construction of connections and some problems existing in
the laying of pipelines. Among them, the most important is the quality problems existing in the flat plate fabrication and installation. The angle plate is very easy to be broken in the specific application process. The angle plate is a kind of material used to stabilize the overall frame of the assembly building. By using the angle plate, the stability of the whole building can be effectively improved. Thus it can be seen that the corner plate plays a very important role, so it is necessary to ensure the stability of the whole angle plate. In this way, the function of the angle plate can be brought into full play. Although the area of the angle plate is very large, it is easy to be broken in the process of application because of its thin size. In addition, the angle plate will be damaged due to some improper transportation in the process of transportation [2].

In the process of carrying out the flat-plate installation, the problem that the size deviation exists can also lead to problems in the whole installation process, and during the splicing process of the wallboard, the joint can be scientifically and effectively processed. If no effective treatment of the joints will result in a number of large errors, this will seriously affect the subsequent construction of the entire building. In the process of joint treatment, some special instruments and equipment are required, but due to the lack of some more precise control tools, the deviation of the whole joint will be large, which will cause the actual situation to be seriously inconsistent with the ideal target in the earlier stage. The comprehensive quality of the worker has great influence on the construction quality of the whole assembly building, but from the current practical development situation, the worker's practical experience is less, the installation of the component and a series of subsequent operations can be seriously affected, In the process of measuring the size of the component, some of the staff will cause the measurement error to occur due to negligence [3].

2.2. Quality problems in component connection

There are also serious quality problems in the connection of components. Due to the lack of saturation in the process of grouting, the grouting will not meet the pre-preset standard. This will lead to the component is very prone to deviation, in the process of concrete filling, concrete needs to flow out of the uppermost hole, so as to effectively complete the whole grouting process, but in the specific grouting process, it is not strictly in accordance with this requirement of filling, which will lead to the filling saturation of the whole mud is not high, thus affecting the quality of the whole construction. In the process of sleeve connection, some mistakes will also occur in the process of sleeve connection. In the process of constructing sleeve, displacement is easy to occur, and once displacement occurs, steel bar can not be inserted into the exact position. However, this situation can be made up in time, but if there is a complete deviation, then the components can only be reprocessed, which will not only increase the workload of staff, but also waste a lot of resources, and will have a very serious impact on the quality of the whole assembly construction project.

2.3. Quality problems in component and pipeline embedding

In the process of embedding components and pipelines, there will often be pre-burying falling off or plugging. If there is any deviation of embedded components, it will have a serious impact on the whole construction site, and some construction work can not even be carried out normally. This will happen because the connection is not in place during the production and embedding of components. During the process of pipeline embedding, some embedded pipelines will fall into the concrete, which will cause blockage of pipelines. In the process of fixing the components and pipelines, due to negligence not doing the fixing work, it will also cause deviation or even fall off during the vibrating process, which will have a serious impact on the construction quality of the whole building.
3. Prevention and control measures of common quality problems in fabricated building construction

3.1. With the aid of an auxiliary tool
In order to promote the rapid development of the construction industry in our country, we must solve the problems existing in the construction process scientifically and effectively, ensure the construction efficiency and constantly improve the construction quality, so as to promote the social and economic development of our country more quickly. In the process of solving the common quality problems of the assembled construction, we can first make full use of auxiliary tools to improve the construction quality. In the process of installing the angle plate of the assembled building, because it often breaks, the L-shaped hoist can be used to avoid this situation. In the process of installing the plate, the protection angle of the plate can be used to ensure the stability of the whole plate, the specification and protection degree of the components can be taken as the basis, and then the plate and rubber materials can be matched effectively, which can protect the stability of the whole plate in the transportation process, and at the same time effectively avoid some depreciation in the transportation process. In the process of transportation, the relevant personnel should adopt scientific and reasonable transportation method to fully understand the gap between each plate. If the conditions permit, the gap between the plates can be expanded as much as possible, which can effectively prevent the friction between the plates and lead to some damage. In order to better protect the quality of the plate in the transportation process, the number of transportation can be properly increased and the number of single transportation can be reduced, which can avoid damage in the transportation process and thus improve the whole transportation efficiency.

3.2. Other preventive measures
In order to effectively avoid the occurrence of this situation, the relevant personnel should control the span within a reasonable range as much as possible in the process of designing the laminated plate, so as to effectively avoid the damage in the hoisting process. In the process of design, the scientific rationality of design can be improved by repeated experiments.

In order to better solve this problem, it is possible to carry out effective reinforcement around the embedded parts in order to better solve the problem, and the hoisting can be carried out directly by adopting a steel frame. The method can effectively protect the whole laminated plate and prevent the overlapping plate from falling off during the pre-embedding process. The relevant staff can scientifically and effectively adjust the current hoisting point position, so that the scientific rationality of the whole hoisting can be effectively ensured, and the problems of falling off and quality in the hoisting process can be prevented.

4. Some other constructive suggestions

4.1. Professional training for assembled construction personnel
In order to continuously improve the quality of assembled construction, in addition to some of the protective measures mentioned above, quality assurance can also be carried out through the following ways. The relevant departments should carry out professional and systematic training for construction personnel, so that construction personnel should not only master solid professional knowledge, but also continuously improve their practical ability and carry out some comprehensive training activities on a regular basis. Let every construction personnel participate, which can effectively improve the operation standardization of the construction personnel, and constantly reduce some mistakes that may occur in the construction operation process, so as to truly ensure the quality of the assembly construction.

4.2. Establishment of quality supervision mechanism
In the process of assembly construction, the relevant departments should establish a perfect supervision mechanism to supervise the construction situation of the whole site and the staff scientifically and effectively. Once some problems are found in the construction process, how to solve them at the first time, so as to effectively prevent the influence on the follow-up construction process caused by the mistakes of a certain construction link. Scientific and effective supervision of each construction link can improve the construction quality and curb the emergence of some construction problems from the source.

5. Conclusion
In summary, with the rapid development of the information age, the construction industry has also developed very rapidly. Prefabricated buildings have received more and more attention during the construction process. In order to continuously improve the construction quality of prefabricated buildings, we should thoroughly study the existing problems in the current construction process, use computer big data to dig deep, and take some targeted solutions to the problems, so as to effectively improve the construction quality of prefabricated buildings. In order to promote the long-term sustainable development of my country's construction industry.

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