

Research on the application of waterproof and impermeable construction technology in building engineering construction

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Abstract: With the rapid development of China's economy, people's material life has been greatly improved. At the same time, people for the construction engineering construction requirements of the standard is also gradually improved, the construction has strong safety and reliability. In today's construction process, a variety of new construction technologies and construction methods are widely used, waterproof and anti-penetration as one of the main technologies of today's building construction, has an important practical role. Therefore, in the process of building construction, waterproof and anti-seepage construction technology has been widely used, and has greatly improved the construction quality of building projects. In this regard, this paper analyzes the application of waterproof and anti-seepage construction technology in the construction of construction projects, hoping to provide some valuable reference and reference for the majority of friends.

Key words: Waterproof and anti-penetration; Construction technology; Construction engineering; Applications

Introduction

In the new era, people have higher requirements for construction projects, which not only require them to have high quality, but also have strong safety. In the past construction projects, there are often leakage problems, which not only has a certain impact on the overall safety of the building, but also has an adverse impact on the functionality of the building. Nowadays, in the process of building construction, the application of waterproof and impermeable technology can be a good solution to one of the problems. Therefore, in the construction process, as a construction technician, should fully understand the cause of leakage, and on this basis to optimize and upgrade the construction method, the use of waterproof and impervious construction technology, effectively avoid leakage problems in the construction process.

1. The important value of waterproof and impermeable construction technology

Nowadays, the actual application of construction engineering is analyzed, once there is leakage problem in the project, it will certainly have an important impact on the overall function of the building, and in severe cases, it will also cause damage to the local structure of the building and pose a great threat to the overall safety of the building. In addition, the leakage problem will also cause a large number of economic property losses, the situation is serious, may also lead to the loss of the overall building application function. Therefore, in the actual use of the construction project, the leakage of the building has an important impact on its due function, stability, safety and so on. In order to improve the performance of the building and avoid the leakage problem in the actual use process, in the process of building construction, waterproof and impermeable construction technology can be applied to improve the overall impermeability of the building in this way, which can not only improve the service life of the building, but also effectively protect the lives and property of residents, which has important practical significance and value. Can provide effective protection in the function and quality of the building, so as to effectively improve the quality and safety of the building construction.

2. The status quo of waterproof and impermeable construction technology in building engineering

(1) External wall leakage construction status

About the construction of the external wall is relatively more, the relevant construction units and specific construction personnel need to proceed from the actual situation, do a good job in the setting of the structure, to ensure that the external wall can give full play to the effectiveness of preventing noise, fire insulation, wind and rain. When there is water seepage in the external wall, it will lead to other performance and efficacy of the external wall will also be affected, and it will also affect the overall safety and stability of the building. The relevant construction personnel and construction units need to strictly control the project from all levels, and strictly control the whole project according to the various contents involved in the construction process. In some special areas, there will often be bad weather, such as typhoons, rainstorms, hail, etc., which will bring great impact to the building, the construction personnel need to consider from all aspects to do a good job of anti-leakage work. Generally speaking, there are three main aspects of leakage in the external wall, which are leakage through the wall pipe, leakage in the masonry structure and leakage by the window. For example, some pipes have problems because of sealing, which will also lead to leakage. Some engineering masonry group building mistakes, will lead to the top brick diagonal building interval time is short, the ash joint is not full, which will also lead to leakage problems.

(2) The current situation of roof leakage construction

The roof of many buildings is prone to leakage problems, and the relevant construction personnel should start to analyze the work from all angles and make preparations for leakage prevention. At the same time, the relevant construction personnel also need to be combined with the actual situation of the house to clarify the construction status of the load-bearing parts, and start to control the problem of water leakage from various angles. In this process, the relevant construction units should pay attention to improve the overall level of construction, because in the specific construction process, many project quality will be limited by the overall level, the roof is no exception, it is easy to cause the emergence of leakage problems because of the low construction level. For example, in the overall construction process, there are

certain problems in the design and construction of some concrete waterproof structures, leading to inadequate construction or loose concrete structures. In addition, during the construction process, some construction drawing personnel may also cause problems in the construction quality in the process of trampling negative reinforcement, which ultimately affects the waterproof performance of the roof. There are also construction units, in order to pursue private interests, in the construction process, and did not strictly in accordance with the relevant construction requirements and norms to select waterproof materials, select some quality and function of poor waterproof materials, resulting in project quality problems. The relevant staff need to start from the specific situation, make reasonable arrangements for the roof, and ensure that the thickness of the waterproof layer meets the construction specifications and requirements. If the waterproof of the roof is relatively weak, and there is no additional layer, it will affect the effectiveness of waterproofing.

(3) Construction status of basement seepage

The basement is generally built at the bottom of the building, and many owners often use it as a utility room. First, because the internal environment of the basement is extremely dry, and a large number of pipelines are often laid underground, the concrete mortar is too dry for a long time, which will increase the probability of local dry cracking, resulting in water in the pipeline flowing into the basement, resulting in leakage problems. Second, in the process of installing pipelines, if the dismantling time is not scientific, it may also become one of the causes of leakage. Third, in the construction process, there will often be impact, knocking and other behaviors, which will also lead to different degrees of loosening of the local pipeline, resulting in water leakage.

(4) Water leakage construction status of kitchen and bathroom

Compared with other locations of the house, the kitchen and bathroom is the area with the highest frequency of water use, and it is also the location with the highest incidence of water leakage. The main reasons for the water seepage problem are as follows: First of all, in the construction process, the details have not been well treated, and the construction has not been carried out according to the standard. Secondly, the floor selected for construction is relatively thin, part of the construction party has not carried out a comprehensive analysis of the construction environment elements, the laying of steel bars is not scientific and reasonable, or the location of the protective layer is not scientific enough. Finally, in order to speed up the progress of construction, the relevant construction units did not carry out construction operations in strict accordance with the plan, and after the completion of construction, the closed water test was not carried out, leading to some hidden construction problems were not explored clearly, thereby increasing the incidence of leakage problems.

3. The specific application path of waterproof and impermeable construction technology

(1) Application of waterproof and impermeable construction technology for building external walls

In the construction process, when the external wall is painted, if the order can not be controlled in an orderly manner, it will often lead to leakage and water seepage on the external wall. In the actual construction process, in order to be able to better solve this problem, you can pay attention to the following aspects: First of all, in the small brick waterproof and impermeable construction operation, should mainly pay attention to its shrinkage, to ensure that it can meet the national construction requirements and standards, in the construction site, should avoid the small brick damp situation, if there is a wet problem, it will lead to shrinkage or expansion, if the situation is serious, it will also affect its quality, resulting in cracks. It will eventually lead to the failure to achieve the role of waterproof and impermeable. Secondly, in the construction process, it should be noted that small blocks can not be mixed with other wall materials. For different wall materials, the ratio of mortar and mixing also have different requirements. Mixed masonry will lead to lower strength of masonry, resulting in cracks and leakage.

(2) The application of indoor and roofing waterproof and impermeable construction technology

For indoor and roof construction, in order to better apply waterproof and impervious construction technology, influencing factors should be comprehensively considered, especially weather factors. In the construction process, in order to better avoid the concrete and other related hard materials because of moisture, resulting in a change in quality, affecting the quality of construction, before the construction, the need to pay attention to the weather conditions and to avoid construction and operation in rainy days. Before the construction starts, the relevant staff should also carry out a comprehensive inspection of the construction site, if there are certain defects in the wall, it should be repaired in time. After all the inspection work is completed, the concrete construction work is implemented. In the construction process, its compaction and slump should be reasonably controlled. In the construction of the corner of the eaves, the construction personnel can place as many rebar as possible, adjust the negative moment rebar of the indoor roof structure, and should pay attention to make it recover as soon as possible. After the completion of the construction work, should also pay attention to the indoor and roof maintenance, especially in the summer construction process, should pay attention to maintenance, so as to effectively avoid the evaporation of water in the house too fast, resulting in cracks, therefore, after the completion of the construction work, should also water maintenance of the roof, maintenance time takes 7-14 days.

(3) The application of basement waterproof and impermeable construction technology

The basement is also the top priority of waterproof and impermeable work. In the process of concrete structure pouring in the basement, the segmented pouring method should be used again, that is, after the completion of a section of pouring, waiting for the water inside the concrete to evaporate after the secondary pouring, and at the same time, it is also constantly vibrating during the pouring process to enhance the waterproof and impermeable effect of the concrete in the basement. In the construction process of the roof and bottom plate of the basement, the concrete must be poured continuously, and the construction joint cannot be left. The indwelling construction joint between the bottom plate and the wall should be no less than 200MM above the floor surface. Wait for the completion of the concrete structure construction, to use waterproof mortar or oil mahjong through the wall to pull the screw reserved holes to seal, in the polymer

waterproof coil construction process, should be polished around the reserved holes, and two layers of paste. In the process of waterproof and impermeable construction of the basement, the materials used in the construction joint and the post casting belt have good waterproof and impermeable performance. In the process of selecting materials, we should do a good job of acceptance, and can be used after acceptance. In the process of construction for the waterproof layer of the basement, it is necessary to carry out strict acceptance and testing of the waterproof material, and after the completion of the waterproof construction operation, protective measures should also be strengthened.

(4) The application of waterproof and impermeable construction technology for kitchen and bathroom

In real life, the kitchen is often the hardest hit area of leakage, which has a serious impact on People's Daily life. Under normal circumstances, the main reason for the leakage problem in the kitchen and toilet is due to the damage of the pipeline, resulting in the destruction of the waterproof layer. In order to better solve this problem, under normal circumstances, the kitchen and bathroom floor should be about 50mm lower than the living room or bedroom floor. In addition, because the kitchen and bathroom belong to the water area, in the actual construction plastering stage, you can appropriately add some waterproof powder. Brush, can effectively prevent the problem of water leakage in the bathroom.

Epilogue

In a word, the leakage problem in the construction project will have an adverse impact on the overall safety of the building and the function of the building. Therefore, we should actively prevent the occurrence of leakage problems. In the actual construction process, in order to better prevent the occurrence of leakage, the relevant construction personnel should conduct a comprehensive analysis of the cause of leakage, and on this basis, the use of waterproof and anti-seepage construction technology, so as to better avoid the occurrence of leakage problems.

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