Application of Anti Leakage Technology in Building Construction

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Abstract: In recent years, China's residential construction industry has developed rapidly, and the scale of construction has been expanding. In the process of project construction, house leakage is a common problem, which not only directly affects the economic benefits of the project, but also affects people's life and safety. Based on this, in the process of project construction, it is necessary to investigate the causes of leakage. In order to ensure that there is no leakage problem in residential projects, scientific and reasonable methods must be adopted. In this paper, the application of leak proof construction technology in construction engineering is studied in detail.

1. Introduction

In building construction, optimize the performance of wall and foundation to reduce the chance of water leakage and leakage. Ability is the leak proof ability of housing construction. Requirements are higher than other projects. At the same time, due to the complexity of the residential structure, the construction methods and specifications of the leak proof technology applicable to residential projects are also different[1]. Therefore, when building a house, we must take a variety of residential structures as the object. Leakage resistance technology is applicable to pipeline leakage conditions

2. Causes of Leakage in Building Construction

In the continuous development of China's housing construction, the problem of leakage has been very common. The water leakage has brought inconvenience to the users at home, and the interior decoration of the home has also gone back, and the interior paint has fallen off and bulged. In severe cases, moisture may pass through the electrical conduit, making the electrical safety hood at home a shadow. Seepage will corrode the load-bearing structure of the house and affect the stability of the building[2]. Therefore, it is necessary to analyze the causes of the leakage of Construction Engineering in detail.

Table 1 Comparison between ordinary cement mortar and special cement mortar

Project	Ordinary mortar	Special mortar
Thermal conductivity	≤1.1≤1.1	≤1.1≤1.1
Dry density (kg / m^3)	≤1800≤1800	≤1800≤1800
Bond strength (MPA)	28d≥1.028d≥1.2	28d≥1.028d≥1.2
Shrinkage (mm / M)	Shrinkage value ≤ 1.3 shrinkage value ≤ 1.1	Shrinkage value ≤ 1.3 shrinkage value ≤ 1.1

2.1. Unreasonable Design

In the process of design and construction of construction project, there are certain quality problems that affect the reverse osmosis effect of the project. In the actual design, for example, there is no scientific and reasonable selection of anti leakage technology, and there is no exhaust port of roof insulation layer, resulting in water vapor evaporation and leakage. During the construction, some people are worried about the project. And, that does not pay attention to the

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quality of the project construction.

2.2. Incorrect Material Selection

In the process of engineering construction, materials have a direct impact on the quality. Many enterprises often use asphalt materials to prevent leakage in housing engineering. However, due to the performance of asphalt itself has certain problems, it is very vulnerable to the impact of the external environment, resulting in a certain change in the material of the waterproof layer, which leads to asphalt damage and leakage.

2.3. Construction Problems

Improper operation and construction are also important reasons for leakage. In the actual construction of buildings, some construction units do not pay attention to the operation specifications. In order to improve the economy and facilitate the construction, the structure has been modified by individuals. Especially in the waterproof structure, no modified waterproof membrane connection causes leakage.

3. Application of Anti Leakage Technology in Building Construction

3.1. Application of External Wall Anti Leakage Technology

As the external wall is a very important protective structure of the building structure, it not only has to bear a large pressure load, but also provides wind and water protection for the internal structure of the house. Therefore, it is necessary to strengthen the outer wall structure by leak proof technology. First of all, the building should be set up scientifically to make the external wall structure meet the necessary conditions and reduce the probability of deformation and cracking when the external wall is under heavy pressure. Scientific structural design can also make the outer wall firm and firm. It is very high, very conducive to strengthen the performance of the building, expand useful life[3]. The quality management of concrete structure should also be applied. The adjustment of the ratio of concrete materials and the application ratio of several special reagents can reduce the need of water and heat injection when concrete is used, and the probability of temperature difference crack of the concrete structure of the exterior wall of the residence is reduced, at the same time, it occurs at the same time. By strengthening the scalability of concrete, it is necessary to reduce the possibility of sinking cracks and other diseases in the use of residential projects. Finally, in the construction process, if we choose the appropriate weather to avoid the weather, the weather will be very cold, such weather will seriously affect the specific construction quality, not conducive to the construction quality of buildings[4]. It is necessary to pay attention to the deformation and other general expansion joints, settlement joints and seismic joints of buildings under construction, and check the environment and foundation of buildings to prevent cracks and other phenomena in the project.

3.2. Application of Roof Anti Leakage Technology

Before building construction, according to the characteristics and temperature of the project, the reasonable waterproof materials are selected. In this way, the material can meet the relevant requirements. After the selection of waterproof coating and coil, in order to give full play to the value of waterproof materials, there are still scientific and reasonable solutions. Before pouring concrete, wash the subgrade to make it wet. When injecting, please strictly follow the relevant specifications. For example, when performing vibration operations, ensure uniformity. When pouring, do not pour continuously. In addition, in the process of concrete planarization, it is necessary to assemble doors and windows to ensure joints, determine the slope according to the actual situation of the building, and avoid the problem of normal temperature. It is worth noting that there are great differences in the design of slopes of different waterproof materials.

3.3. Anti Leakage Construction Technology of Kitchen and Toilet

The kitchen and bathroom are in the building. Because it is easy to hide, there are drainage pipes,

there are many reserved holes. Therefore, in the waterproofing project of residential construction, it is an important topic to prevent the leakage of kitchen and bathroom[5]. As in other construction procedures, water leakage prevention of kitchen and bathroom should start from material, design and construction technology. From the perspective of engineering design, there are many drainage pipes installed in the kitchen and bathroom. Only by scientifically and reasonably arranging the position of pipeline in engineering design can we effectively prevent the poor drainage caused by unreasonable design. However, the practicability and safety of construction materials. When the foundation and wall are waterproof, they must be constructed in strict accordance with the design specifications and specifications. In order to ensure no water leakage, the following construction process can only be carried out after the water test. For example, kitchens and bathrooms are easy to hide water, with many prepared openings and drains. Improper waterproof is easy to cause water leakage of ceiling and wall; it seriously affects the appearance and normal use of the building. In addition, we need to do a good job in the detection and treatment of residential projects. In order to ensure the antifouling effect and construction quality, it is necessary to detect the exterior wall and edge surface of indoor doors and windows in time. Once leakage is found, the engineering personnel must deal with it immediately, and the engineering supervision personnel shall inquire after the maintenance process. After 5 hours of water exposure, if there is no leakage problem on the inner wall edge surface of the door and window of the house, then the leakage proof effect is significant and can be used.

3.4. Application of Anti Leakage Technology for Doors and Windows

Generally speaking, the leakage of doors and windows is mostly the joint of the wall. Although the leakage is small, it will also affect the project quality. Therefore, the construction personnel should pay attention to it. The reason for the leakage of doors and windows is that the construction is not in strict accordance with the relevant specifications, or the unqualified materials are used. In order to reduce the construction period and cost, some units apply substandard materials in the construction, resulting in the decline of the quality of doors and windows, which is also an important reason for leakage. Based on this, when the doors and windows are leak proof, the following aspects can be analyzed: (1) before installing the window frame, the window opening should be strictly checked to avoid the occurrence of water leakage[6]. (2) when installing the window frame, it is necessary to meet the size of the opening and provide convenience for the subsequent application of foaming agent in the window frame. (3) the mortar caulking shall be carried out by professional personnel to ensure its uniformity, especially the internal corner of the window, which is also neglected in the construction. (4) in order to improve the construction effect, waterproof coating shall be added at the window opening during the operation of anti leakage of external window. In order to improve the leakproofness, during the construction, it is necessary to ensure its dryness, press polish the outer side of the joint, and powder polish the windowsill and window side[7]. Waterproof coating also ensures its continuity. After the completion of waterproof work, strict inspection shall be carried out, and the construction of the next process can only be carried out after it is qualified.

3.5. The Application of Basement Anti Leakage Technology

In the underground engineering of construction engineering plan, it is necessary to establish good leak proof technology. 1) in order to improve the protection of the deformed joint, the quality of the water stop shall be strictly checked before installation and whether it has been sealed. 2) when choosing cement, we must choose high strength, which can improve the structural rigidity. Mixed materials can be used for mixing concrete. 3) prevent the joint from air leakage[8]. Firstly, cement mortar similar to concrete grade is installed to improve the joint tightness. Then, when pouring, set the connection between the floor and the wall on the wall and keep a certain distance from the ground. In addition, the waterproof work shall be repaired after completion.

4. Conclusion

In a word, the main application direction of leak proof construction technology in residential construction projects is roof, sliding door, window and kitchen and bathroom structure[9]. In the construction, it is necessary to adopt the leakage resistant technology suitable for the construction structure. Analyze the environmental temperature and water environment of the surface and other structures, and seek appropriate countermeasures to prevent leakage. The problem of house leakage has a great influence on the living experience of the residents[10]. It not only destroys the interior decoration of the house, but also corrodes some lines and pipes of the interior structure of the house. Therefore, for each structure of the residential project, in order to ensure that the house is dry and clean, leakage resistant strengthening technology must be implemented. Provide residents with better life experience.

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