

Application of Anti-leakage Construction Technology in Housing Construction

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Abstract: With the continuous development and progress of the market economy, the number of building construction projects is increasing. In order to effectively improve the quality of housing construction projects, relevant departments must actively promote various quality supervision and management technologies in order to fundamentally improve the construction engineering technology. The monitoring effect to a certain extent achieves the sustainable development goals of the quality of construction projects. This paper combines the case to analyse the factors affecting the operation of anti-leakage construction technology in the construction project, and discusses the application path of technology in the construction of housing construction.

Keywords: *anti-leakage construction technology, housing construction, influencing factors, application*

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0 Introduction

The construction process of the house is complicated and the construction period of the project is time consuming. It is necessary to comprehensively consider the specific technical mechanism and management path for the actual construction, which effectively establish a sound and complete technical management process and professional anti-seepage for construction workers. Leakage construction knowledge and practical skills should be comprehensively controlled and have to be controlled to a certain extent to ensure the overall level

of housing construction projects.

1 The case

This article takes a housing construction project as an example. The project is located in the economic development zone of the city and belongs to the company's comprehensive office building. The main building covers an area of 15,000 m². The project starts construction at the end of 2015 and is expected to be completed in three years' time. The building has 10 floors and 1 underground. The specific project details are shown in Table 1:

Table 1 Functions of each layer of the project

No.	Item	Content	Area
1	First floor	Public area, hall, elevator	1150 m ²
2	Second floor	Living area	1055 m ²
3	Third floor	Hotel room (standard room, single room)	5750 m ²
4	Fifth floor - Seventh floor	Deluxe Suite	2550 m ²
5	Seventh floor - Tenth floor Office	Office, activity room, lecture hall	1150 m ²

After planning the application process at each level, the construction department carried out the work of designing the construction plan for the whole project. They discussed about certain specific problems, and were much concerned on the anti-leakage, door and window leakage prevention technology system of the roofing project which could effectively improve the overall quality of the project.

2 Factors affecting the construction of building leakage prevention

For the construction of an engineering structure, anti-

leakage construction technology has very important value and effect. It is the key process to avoid corrosion and damage of the building structure caused by water, especially the housing construction project. The anti-leakage construction process to a certain extent can improve the overall quality and safety of engineering projects, it is necessary to attract attention from relevant technical departments [1]. At present, the common anti-leakage construction techniques are mainly divided into structural anti-leakage construction technology and construction anti-leakage construction technology. The former mainly improves the crack resistance of related components by means of structural concrete shrinkage rationality. Mainly by means of the comprehensive application of the differential anti-leakage construction operation process to ensure that the overall quality of the construction project meets the actual needs. In order to effectively improve the application effect of anti-leakage construction technology, relevant technical departments should actively implement a more systematic technical supervision and management process, and ensure the rationality of the corresponding operational procedures [2].

On one hand, it is necessary to analyse the factors affecting the construction of anti-leakage. See Table 2 for details:

Table 2: Factors affecting the quality of anti-leakage construction

No.	Influence factor	Expression form
1	Design factors	Designers neglect the anti-seepage construction of exterior wall, wall in anti-seepage design, lack of on-site investigation of construction design, failure to follow the building design standards, climate characteristics/location considerations are not in place
2	Construction factors	The construction design is not standardized, the construction standards are not handled properly, and the construction progress is blindly pursued.
3	Material factors	Inappropriate choice of asphalt materials, insufficient waterproofing of plastering materials

On the other hand, the penetration site and the main cause are normalized. At present, in the process of analysing the anti-leakage construction project, it is found that door and window penetration, roof penetration, external wall penetration, kitchen and toilet penetration are the vulnerable parts. Door and window infiltration is mainly due to the lack of effective crack treatment in the material masonry work of the relevant

construction department, especially during the later stage of the project. Without supervising and controlling the waterproof performance of the building, the overall engineering process will be limited [3]. Roof infiltration is mainly caused by the fact that the roof panel is not constructed in accordance with the requirements of the standard management, which causes cracks in the roof panel and causes leakage problems. Leakage of the external wall is mainly due to the failure of the installation process of the tie-bar in the process of connecting the wall, which limits the quality of the wall casting [4]. Leakage in the kitchen and bathroom are due to the thickness of the concrete applied during the construction process which are not up to the corresponding standard.

3 The application of anti-leakage construction technology in housing construction

In order to improve the overall quality of the anti-leakage construction project, the construction department should actively establish and improve a better overall supervision and management mechanism, and optimize the quality control efficiency of the anti-leakage construction to ensure that the management process can be maintained fundamentally. Rationality, so as to achieve the goal of sustainable development of housing construction projects.

3.1 Wall anti-leakage construction of housing construction project

In the construction management of housing construction, the construction department should arrange the construction technical system in combination with the management requirements and the rationality of the construction planning, and improve the rationality of the construction elements of the housing construction. Relevant technical departments should systematically apply plastering on the wall to ensure the rationality of the control efficiency of the engineering system [5].

First, we must pay attention to the cleanliness of the wall. In the anti-leakage construction technology system, in order to ensure the anti-leakage effect of the wall surface, it is necessary to ensure the convenience of the construction of the building on the basis of maintaining the flatness of the wall surface operation space.

Second, in the wall anti-seepage treatment system, in order to improve the timeliness of the control process

rationally, it is necessary to integrate the management structure and standards, to some extent in order to upgrade the adhesion between the mortar and the wall, and also for the subsequent management process. Management lays the foundation^[6]. It should be noted that for the wall construction project, the overall area is large, which requires the construction department to supervise and control the coating thickness on the basis of the layering application process, and the effective surface is locally thin or thick.

Third, in order to ensure the overall quality of the construction project, the construction management personnel should pay attention to the plastering treatment. Especially the basic quality of the construction materials, to meet the actual management needs, fundamentally maintain the compression resistance and waterproof performance, and achieve construction. The supervision and management objectives of the materials also create a good space for the implementation and optimization of the subsequent construction supervision system, and promote the overall optimization of the quality of construction projects.

3.2 Roof leakage prevention construction of housing construction project

In housing construction project system, roof anti-leakage construction has very important significance and value, and also have to attract the attention of the construction technology department. The most important thing is the selection of anti-seepage coating and waterproofing membrane, combined with the construction project. After a comprehensive and complete investigation of processing procedures, basic conditions and environmental factors, , specific analysis of specific issues, can effectively improve the basic quality of construction management^[7]. It should be noted that the rational material management mechanism can effectively reduce the probability of roof leakage and improve the overall quality of the roof construction project, laying the foundation for the overall progress of the subsequent construction supervision system.

First, the construction department should select the operation process that is more suitable for the construction process in combination with the construction points, and carry out the anti-leakage construction according to the construction elements and the rationality of the construction plan, so as to ensure that the roof construction process can meet its actual

needs and improve to some extent. The comprehensive level of construction follow-up supervision^[8].

Second, the construction department should choose a reasonable waterproof coating, and plan management for the application of two waterproof materials to ensure that the interval between the two work processes can be effectively controlled, and should not be too long. Moreover, after the smear work is completed, the corresponding water injection test operation should be performed, and the anti-seepage performance have to be effectively inspected and supervised, and comprehensively find improved in the timeliness of work management..

Third, because most construction projects are exposed to the external environment for a long time, the probability of being affected is large. This requires the relevant construction departments to comprehensively consider the impact of the external environment, especially the roof waterproof materials in the environment. The constraints encountered in the middle, to some extent reduce the housing area water problem to improve the overall quality level and the rationality of the operational process.

3.3 Door and window anti-leakage construction of housing construction project

For housing construction projects, the anti-leakage construction of doors and windows is very important which affects the quality of the entire construction project. Based on this, it is necessary to pay attention to the specific construction mechanism and construction elements from the multiple layers of the anti-seepage treatment mechanism of doors and windows, aesthetics and practicability, to improve the rationality of the construction process to a certain extent, and to lay the foundation for smoothly carrying out the construction supervision and management work^[9].

First, the construction department should supervise and manage the materials in real time during the transportation of doors and windows material to ensure that the materials will not be damaged or deformed, which can effectively avoid the correction process after the installation is completed, and ensure the overall quality of the construction projects to a certain extent.

Second, after the material selection is over, the door and window fittings should be managed. For the door and window structure at the end of the installation, gap filling and control should be carried out to ensure the basic quality of the door and window anti-seepage

construction to a certain extent. It should be noted that the door and window fittings should be supervised and managed in accordance with the overall requirements of the construction planning and construction projects, avoiding blind selection, and specific constraints on specific work from multiple layers such as economy, practicability and design requirements, in order to improve the construction project overall quality.

3.4 Anti-leakage construction of kitchen and toilet project in housing construction project

Because there are staff canteens, guest rooms, etc. in the case project, the kitchen and toilet projects should also be paid attention to, and the kitchen and toilet are more in terms of water consumption, which requires centralized supervision of the anti-leakage effect^[10]. That is to say, in the anti-leakage construction process of the kitchen and bathroom project of the housing construction project, comprehensive control and treatment should be carried out on specific links to ensure the rationality and effectiveness of the corresponding operations.

First, it is necessary to comprehensively measure and centrally manage the distance between the pipeline and the floor slab, have to effectively improve the actual effect of the relevant parameters. Avoid the distance between the corresponding slabs, and to some extent maintain the rationality of the management process^[11].

Second, comprehensive control of the drainage pipeline should be carried out to ensure that the effectiveness of the casing treatment process can be reduced. For the heating pipeline, a suitable casing structure should be selected to avoid the impact on the overall construction process.

Third, it is necessary to pay attention to the connection position between pipelines, comprehensively improve the rationality of the anti-leakage material smear treatment process, fundamentally optimize the pipeline rigor, maintain the degree of systemization of construction control and control, and truly optimize the actual construction quality efficiency. .

4 Conclusion

In the process of anti-leakage construction work, in order to practice the principle of seeking truth from facts, the construction department should combine

the actual operational requirements and management points of the project, comprehensively supervise the corresponding steps, and effectively implement the quality maintenance management standards to ensure leakage prevention. The construction technology has been consolidated, and the acceptance criteria for anti-seepage construction have been strengthened. It has laid a solid foundation for the gradual improvement of quality construction work, achieved the goal of optimizing the quality of construction projects and comprehensive water levels, and promoted a win-win situation for both economic and social benefits.

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