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Research Article

Analysis of Common Problems and Technical Points in Quality Management of City Water Supply and Drainage Construction Quality

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Abstract: In recent years, the quality of people's lifestyle has significantly increased when the speed of social and economic development is accelerating. Among them, the management of city water supply and drainage construction quality can provide the necessary guarantee for the improvement of people's quality of life, so the scientific of construction quality management will also become the focus of urban modernization. However, there are many problems in the management of water supply and drainage construction quality in cities after considering the real situation. If the problems are not solved as soon as possible, it will affect people's daily life and works badly and also restrict the development of urbanization. Therefore, the implementation and practical of city water supply and drainage construction quality management are very important. Based on this, the main research content of this article is about the city water supply and drainage construction quality management and to elaborate the existed common problems and raises up some technical points and hopes that this article content can help in the management of drainage construction quality.

Keywords: *municipal; drainage construction; quality management; common problems; technical points*

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0 Introduction

At this current stage, people's attention to the projects of water supply and drainage construction has increased significantly. Since the water supply and drainage project plays an important role in people's daily life and the process of development, therefore, it is necessary to ensure the construction quality of the water supply and drainage project and make sure the water supply and drainage project has played out its critical role. From here, we can see that there must be some practical significance of the further research and analysis on the common problems and technical points in the management of city water supply and drainage construction quality.

1 Necessity explanation on the management of city water supply and drainage construction quality

In the process of urban modernization, the necessity of city water supply and drainage has gradually emerged, which can provide necessary guarantee for attempting development[1]. In summary, the necessity and main performance of city water supply and drainage construction quality management are shown in Table 1.

2 Research on common problems in city water supply and drainage construction quality management

2.1 A serious lack of management awareness

Considering the current situation of construction development of water supply and drainage project in the domestic city, we can understand that the water supply and drainage enterprises are seriously lacking awareness on the quality management in the process of carrying out the construction plan and do not form a correct cognition on the important roles of quality construction projects. These produce great security

Table 1. The role and necessary performance of city water supply and drainage construction quality management

Point of action	Specific performance
To avoid construction materials that do not meet specifications to be sold in the market	The number of workforce in domestic city water supply and drainage construction is not many, and it is difficult to match the needs and development of city water supply and drainage construction at any time. Under this circumstance, construction materials that do not meet the quality standards will be sold to the city water supply and drainage construction site, which will seriously increase the hidden dangers in city water supply and drainage construction. Therefore, we must pay high attention on the important role of management of city water supply and drainage construction quality
Prevent hidden dangers caused by misaligned and wrong instruction in construction due to imperfect management system	Because the city water supply and drainage construction enterprises do not have a scientific management system, it is difficult to correctly lead the construction of water supply and drainage projects according to the necessity guide. Since the city water supply and drainage construction management standards will directly affect the construction safety and quality of the water supply and drainage project, thus, to ensure the effect of the city water supply and drainage construction quality management, it is necessary to change the existing construction management methods and create a new management mechanism of water supply and drainage

risks on the later stage of work and usage of the water supply and drainage project which disadvantageous to the improvement of construction projects quality[2].

In addition, in the construction management of city water supply and drainage projects, the construction enterprises have a serious lack of awareness of safety responsibility, which has adversely affected the construction cost of the project and will also have a negative impact on its future development goals. Under this circumstance, the corresponding tactics should be actively used to continuously enhance the construction management awareness of the city water supply and drainage project to ensure the reliability of the construction of the project and provide the necessary guarantee for the modern economic progress in the city[3]. In the process, some water supply and drainage construction enterprises can easily evaluate the reliability of raw material quality incorrectly to obtain considerable economic benefits in all stages of construction in the projects. In particular, the supervision unit has seriously inadequately controlled and caused the serious shortage of constructions of water supply and drainage, which has significantly increased the construction risk factor of the project and has a greater impact on the construction cost of the city water supply and drainage project.

2.2 Vague responsibility in construction management

As we all know, the construction plan of the city water supply and drainage project and its planning in different stage are relatively abundant. and the construction process flow is complicated, which will make the difficulty of management work of construction quality significantly increase, and these have a direct impact on the safety and reliability of the project[4]. However, due to the small scale of some construction enterprises, they have not much funds that can be used for turnover, and their level of construction technology is not high, therefore, the operation stage of the water supply and drainage construction will be lack of standardization, and even some are in the situation where the quality is not fulfill the standard requirements which then will cause disadvantageous effect on the water supply and drainage construction quality. In the actual operation, the internal technical staffs of some construction enterprises do not meet the standard requirements of the reference in construction site geological conditions and the industry reference. Therefore, when formulating and implementing the construction plan, they are too depending on the existing construction experience, increasing the security risks in the water supply and drainage construction project. Based on these, those functional departments that participating in the project construction have no clear cognition about the scope of responsibilities in the water supply and drainage quality management, and they have not enough experience on the different types of management projects which has a negative impact on the safety performance of the water supply and drainage project itself.

2.3 The monitoring effect of the project construction process is not satisfy

To effectively avoid the bad effect of other factors on the quality and progress of city water supply and drainage construction, it is necessary to ensure that the basic functions of the supervision unit are fully utilized and the construction plan can be successfully completed within a certain time frame. Considering the actual

situation of the development of city water supply and drainage projects at this current stage, we can understand that many supervisory enterprises have serious lack of awareness of safety responsibility in construction projects, and the actual supervision is also difficult to adapt to actual needs, resulting high risks in the safety of water supply and drainage projects[5]. In addition, there are many supervisory staffs whose own professional accomplished level is low. In practice, it is difficult for them to make full use of professional technology and play out their own supervision role, and the incidence of wrong operation by construction worker of water supply and drainage construction, some supervisory staff carried out unreasonable supervision works which may cause the construction projects quality management do not meet or satisfy the expected requirements, this is not good for the management works and its effect.

3 Effectively control the quality of city water supply and drainage construction

3.1 Continuously improve the supervision standards of construction quality

According to the operation status of the construction quality management standard of the current supervision enterprise, the strength and perfection are not up to the standard, and the supervision staff's comprehensive ability is not up to standard, it is difficult for them to be competent, and they do not meet the supervision work requirements, these further affecting the functional role of supervision organization. Under this circumstance, the supervision staff must correctly aware of their responsibilities. To further strengthen their practical ability, they should continuously learning the supervision professional knowledge during the practice. Supervision staff should effectively communicate with each other, make progress during the discussion and learning. So that the supervision work can developed smoothly, and the quality of construction can be continuously improved.

3.2 Construction quality management measures in the preparation stage

To implement the preparatory stage before the city water supply and drainage construction project, it is necessary to thoroughly understand and comprehend the contents of the construction design drawings, effectively protect public facilities, and actively carry out measurement and stakeout work. Before carrying out the city water supply and drainage construction project, it is necessary to familiarize the construction drawings and effectively avoid the occurrence of later construction problems. In the process of familiarizing with the construction drawings, it is necessary to conduct a joint review with the design agency, the owner unit, and the supervision organization and then carry out the technical disclosure work. Based on this, it is necessary to go deep into the water supply and drainage construction project and understand the specific conditions of the construction.

3.3 Quality control during the construction phase

First, improve the material inspection and acceptance mechanism. The entrance inspection and acceptance system of construction materials should be actively implemented. After the materials enter the construction site, the relevant information such as the material types, specifications, and production batches of each batch should be systematically inspected, and the sampling inspection work should be carried out according to the technical specifications. It is necessary to carry out necessary tests on the physical and chemical indicators such as the mechanical strength and size of construction materials and must not use materials with substandard quality. Before the material is used, the integrity of the material packaging must also be checked to ensure that the material quality meets the standard requirements.

Second, carry out the work of construction site management. The construction efficiency and progress are the most influential factors on the construction site. If the construction site is clean and neat, it can create an ideal construction environment for the construction enterprise and lay a solid foundation to increase and improve the construction efficiency. Therefore, the construction enterprises should invest more time and energy in the construction site management work[6]. In the course of practice, the project quality supervision proposal needs to be reasonably formulated to ensure that it can be adapted to the construction conditions, and scientifically plan the construction objectives and management objectives to ensure the construction quality. As the project management department, it is necessary to supervise the construction process in real time, further control and mobilize the construction works, and cooperate with the construction enterprises to ensure the validity of construction quality and progress.

Third, carry out the work of construction safety management. The importance of safety management work cannot be underestimated, and safety management control does not exist only in a certain stage of the

construction process but always exists in the whole construction process. Even if there is less construction content, it must be given high priority. In addition, we must effectively train and educate construction workers to ensure that their safety awareness level is improved, and form the basic principle of safety first, ensure the effective implementation of the safety production responsibility system, and determine the various responsibilities of construction, and implement personal responsibilities. Make sure only those worker with professional level can participate in the practice, and it is absolutely impossible to allow undocumented employment. As the upper-level leaders of construction enterprises, they need to be a good leader and become a good example to ensure the safety of construction. Only in this way can we create a safe and civilized construction environment in a scientific and rational manner in the construction unit. In addition, we must actively carry o ut prevention work, build a perfect supervision system, actively carry out inspection work before implementing construction project, to ensure construction progress, and continuously optimize construction quality.

4 City water supply and drainage construction technical points

First, adopt trench excavation technology. The main function of the trench excavation technology is to rationally select the water supply and drainage pipeline to ensure that it can be adapted to the municipal road construction environment. In the process of trench excavation, the flow of characteristics should be followed as shown in Table 2.

In the process of implementing trench excavation, it is required to use mechanical equipment to carry out construction work. Only through this way, the trench strength can be ensured to meet the standard requirements. Second, adopt pipe base construction technology. It should be noted that the pipe foundation is a construction design combined with the road water supply and drainage pipe. Therefore, it is necessary to use the concrete paving method to maintain the pipe foundation safely and continuously enhance the firmness of the water supply and drainage pipe. The specific process is shown in Table 3.

Table 2. Application process of trench excavation technology

Application process	Specific performance
Process one	Systematic investigation of the surrounding environment and conditions of municipal roads
Process two	Excavation construction work, avoiding groundwater leakage problems, and improving trench stability

Table 3. Pipe base construction process

Construction process	Basic content
Process I	In combination with the construction design specification requirements, the concrete is paved at the base of the pipe, and the necessary support is provided for the construction of the soil layer by means of the support points
Process II	In the process of pouring concrete, it is ensured that the initial pouring is in a horizontal distribution state, ensuring the smooth process of the later pipe casting, and promoting the construction works and the development

5 Conclusion

To further improve the urban service function and meet the development goals, we must pay attention on the important role of the city water supply and drainage system and emphasize the role of quality management in the process of construction. With the diversified methods, the quality-related problems will be solved to ensure the quality of the construction of the city water supply and drainage project.

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