

### RESEARCH OF WATER USE CASES IN PRODUCTION ENTERPRISES OF WALL CERAMIC FINISHING MATERIALS

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**Annotation:** This article provides information on the rational use of water, the determination of the allowable limit of wastewater discharge, the prospects for the development of water supply and sanitation systems at enterprises.

**Keywords:** water management, wastewater, construction, organic matter, ecology, substance concentration, resources, ceramic finishing materials, flotation.

Water and its essence are important in the development of the water economy of the Republic of Uzbekistan, protection and preservation of nature, preservation and improvement of the state of ecologically clean environment, and the health of the population. The development of industry and agriculture in the republic, the growth of human living conditions, and the improvement of cities and villages are directly dependent on water, and the requirements for the quality of water increase with the growth of these factors.

As a result, water supply and sewerage experts are faced with the task of solving problems such as the reconstruction and improvement of water intake, its purification and transmission facilities, increasing the strength and efficiency of water supply pipelines.

In the current period, special attention is also paid to nature protection measures when determining measures to get our country out of economic difficulties as soon as possible. In this regard, it is an urgent issue to correctly determine the measures to prevent the pollution of water sources.

The main source of pollution of water bodies is effluents from industrial enterprises. It is of great practical importance to determine the necessary level of purification of waste water generated in industrial enterprises during the production process before it is discharged into water bodies.

Currently, great importance is attached to the prevention of pollution of water bodies. Wastewater from domestic, economic and industrial enterprises is cleaned in certain facilities and discharged back into water bodies. Wastewater pollutes water bodies to a certain extent. In recent years, our government has taken a number of practical measures to improve the sanitary conditions of water bodies.

Law No. ORQ-733 of the President of the Republic of Uzbekistan Sh. Mirziyoyev of November 30, 2021 entered into force three months after its official announcement.

The tasks of the law include regulation of water relations, rational use of water for the needs of the population and national economy, prevention and elimination of evaporation, pollution and depletion of water, improvement of the condition of water bodies, as well as in the field of water relations, enterprises, is to protect the rights of institutions, organizations, farmers, farms and citizens. (In the revision of the law of the Republic of Uzbekistan dated August 29, 1998 - Bulletin of the Oliy Majlis of the Republic of Uzbekistan, 1998, No. 9, Article 181).

The rapid development of the national economy of the construction industry is one of the factors of the pollution of water bodies. In addition to discharging large amounts of waste water into water bodies, maintaining their purity is one of the important tasks of the national economy. Therefore, with the correct selection of the method of wastewater treatment, it is possible to ensure that the water discharged into water bodies fully complies with sanitary standards.

In the composition of wastewater, favorable conditions are created for the development of various impurities and bacteria. Therefore, one of the important factors in wastewater treatment is the separation and neutralization of impurities in water, especially organic substances.

Currently, our Republic is paying great attention to the development of light industry, construction, agriculture and transport.

The construction industry serves for the rapid growth of the national economy and the improvement of the standard of living of the population.

Our country is starting to take bold steps in its economy. Also, the standard of living of the population is changing day by day. Every day, new buildings, courtyards, new public buildings, educational and medical institutions are being built and put into operation. These changes in our lifestyle increase the demand for new modern buildings from our society. Until recently, good quality wall ceramic finishing materials were imported from foreign countries. The construction and operation of the enterprise for the production of wall-mounted ceramic finishing materials is related to the full satisfaction of the needs of the population of our country for this type of high-quality products, the production of products that compensate for imports and exports, the creation of new jobs and the arrival of new revenues to the state treasury. creates an opportunity to solve a number of economic and social issues.

Organization of effective use of natural resources in order to maintain the health of the population and create favorable conditions for their living is considered to be one of the most important issues of state importance in our country.

The health of the population from the negative effects of harmful substances released into the environment, preservation and restoration of the ecological balance in nature largely depends on nature protection measures.

Until recently, the fight against pollution of open water bodies in our country was based on two principles, i.e. mixing sewage with natural water, reducing the concentration of harmful substances by dilution, and cleaning them before discharging them into the water bodies. At the same time, it would satisfy ecological requirements in less densely populated areas and in cases where the productivity of the water basin is high.

The increase in population density in residential areas, the development of industry, energy, and agriculture negates these principles, and even if the treated sewage is additionally and repeatedly treated, it cannot satisfy the sanitary and ecological requirements.

Currently, it is impossible to consider open water bodies as bottomless sources of pollution, or in other words, their accumulation in water bodies disturbs the ecological balance. That is why the effective use of water resources, the prevention of wastage of water, pollution and drying up of water sources, which is considered the wealth of our country, occupies an important place in the policy of the use of natural resources of our country.

In order to prevent the pollution of natural waters, many organizational and technical measures aimed at reducing the pollution of water reservoirs and effective use of water, as well as the construction of sewage treatment facilities, are being implemented in recent years in the enterprises of the production of wall ceramic finishing materials in our country.

Water irrigation of areas, keeping dust moist, cooling of heat exchange equipment, vacuum pump, washing of equipment and dishes, preparation process of plaster, cooling of equipment of ceramic product production shop, process of glaze preparation, water recycling It is used for filling the utility system with fresh water, for laboratory and household purposes.

The water supply system consists of reusable and single-use types. There are two types of sewage networks, one of them is intended for production, and the other is intended for domestic sewage.

Most of the polluted effluents appear in the cleaning of molds, the process of keeping dust wet, and in the ceramic product production workshop. In order to reduce the amount of suspended matter, water hardness, iron oxide, sulfur oxide, calcium and magnesium salts, as well as the biological requirements of oxygen to the required level, various methods are studied and applied in the future during the operation of the enterprise for water purification in the technological process. . For the treatment of sewage with such a composition, pressure flotation and subsequent filtration in a sand filter are used, or flotation is carried out in a biological way. These methods do not always give the intended result. For this reason, it is necessary to take into account the technology, technical equipment, working condition of the equipment and local conditions used in the design of the water supply and sewage systems of enterprises and their sewage treatment.

In the course of the work, the water supply and sewage system of the enterprise producing wall-mounted ceramic products was studied. As a result of scientific research, the structural structure of the water supply and sewage systems in the enterprise, water consumption in the systems and their changes over time, operation procedure, quality indicators and quantities of production effluents, as well as the efficiency of local sewage treatment devices are analyzed.

The results of the analysis showed that the daily amount of highly concentrated wastewater containing petroleum products is  $19.8 \text{ m}^3$ , and  $733.3 \text{ m}^3$  of conditionally clean water is added to it to the point of dumping it into the city sewer. Diluted and then discharged into the city sewer network. In addition, it was found that the efficiency of water use in the fire-fighting water supply system of the enterprise is very low. Recommendations were developed to correct deficiencies in the enterprise and increase the level of efficient use of water. As a result of the implementation of the technology of efficient use of water offered in this enterprise, it was found that the enterprise will be given not only sanitary-ecological benefits, but also more than several hundred million soums annually.

To sum up, the effective use of water, the calculation of the permissible limit of waste water, the prospects for the development of the water supply and sewage systems of the enterprise, the measures to be taken to achieve the standard amount of waste water, the types of water use in the enterprise, Norms and news of water consumption in water supply systems and standard calculation of water consumption in them, water management systems of production and auxiliary shops, fire water supply system of enterprises were covered.

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