IMPROVEMENT OF SPECIAL TREATMENT FOR DRINKING WATER

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Abstract. In this article, scientific approaches to improving the special treatment of drinking water and clarifying water are presented about the achievements we can achieve through.

Keywords: turbidity, cleaning methods, clarifier, operation of filters, 2-stage filters.

INTRODUCTION Water turbidity can also be defined by the concept of clarity. To measure the turbidity of water, a certain amount of water is passed through a paper filter, and after being dried at 1050, it is weighed and measured. To measure the clarity, the water is placed in a glass cylinder prepared in a standard shape, the thickness of which is written on the bottom of the cylinder according to the standard. 1mm letters are readable. Water is increased and decreased until these letters are clearly visible when viewed from above. The thickness at which letters can be read underwater and is measured in millimeters indicates the clarity of this water.

RESEARCH MATERIALS AND METHODOLOGY Water treatment methods and the composition and dimensions of water treatment facilities are selected depending on the demand for water quality at the source and local conditions. In practice, the water treatment plant is intended to perform a complex task (purification, neutralization, softening, etc.). It is advisable to place the water treatment station close to the source. Often, water treatment plants are built according to a scheme based on the flow of water. In this case, the water supplied by the first pumping station flows through all the structures and goes to the clean water reservoir, and from there it is transferred to the water supply network with the help of the second pumping station. Improvement of water quality can be done in 2 stages: "water treatment" and "special water treatment" stages. Water treatment refers to the quality of water at the source UzDst950: 2000 "Drinking water. "Hygienic requirements and quality control". "Special treatment of water" means bringing water quality up to the level of requirements of special enterprises or giving water new properties.

The main ways to improve water quality

Water treatment facilities serve the following purposes:

1. Water purification from small floating particles (water clarification)
2. Loss of coloring substances in water - decolorization of water
3. Elimination of bacteria in water - water disinfection
4. Reducing the amount of calcium and magnesium cations in water - water softening
5. Reducing the amount of excess salt in water (salt content in drinking water should not exceed 1000 mg/l) - water desalination.

All of the above measures are included in the concept of "water purification". Stabilizing water, providing the required amount of H, improving the coagulation process and similar activities are called "special water treatment".

Water clarification The settling of floating particles in water is a very complex process. The sedimentation rate of particles is affected by their size, shape, and the flow of water, water viscosity, temperature, and other factors. In turbid water, particles can be of different sizes (polydisperse system) . When a coagulant (reagent) is added to water, it is achieved by changing the structure and size of the particles and settling them . The main factor that affects the determination of the size of the clarifiers is the settling speed of the particles . The sedimentation speed of particles in water at a temperature of t 10 C is called the hydraulic size of particles . The sedimentation rate of floating particles is shown in Table 1 below .

Water softening can be done in two or one step . Usually, artificial softening of water is carried out in the 3rd stage. In the 1st stage - water is treated with special reagents that accelerate the curing process . In the 2nd stage - small particles floating in water are settled. In the 3rd stage, small particles that cannot be settled are captured by filtration.

CONCLUSION Experiments have shown that double grids with a relative pore area of 3.5 n provide almost the same current distribution as a single grid. At the same time, the experimental values of b1 were 2.6 and 2.7, respectively, i.e. It differs by no more than 5%. Taking this into account, the relative area of the holes with a sufficiently effective distribution of current can be obtained when installing double grids with reflectors, and instead of the recommended n = 0.3-0.5 for a single grid = 0.06-0 .2, which is very important. reducing the risk of their clogging and increasing the reliability of sewage sludge tanks. The relationships obtained with sufficient accuracy for practice can be used to calculate double gratings and gratings with reflectors at n = 2n1 values, where n1 is the relative area of the holes in one grid, as well as (square) holes in the calculation of circular sections, as a result bsh = rres and obtains the formulas nsh = nres.

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