

T2. Selection of estimated natural and waste water quality parameters for purifying plants projects

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When developing a project of a natural water purifying plant for city and industrial needs water supply it is necessary to make technological calculations on the basis of a hydrological characteristics of a water supply source, especially of the water quality. It is also important to set the structure output on the basis of estimated water consumption for the water supply of an object.

Developing a project of waste water purifying plant calculations are made on the basis of a great number of parameters. They include quality and quantity indices of the waste water coming to the plant.

The quality indices of natural and waste water as a rule fluctuate in the course of a year, a month and even a day. The quantity of the coming water is also subject to change in the course of time. Therefore the technique for statistical processing of a database characterizing quality and quantity of the water, and the procedure for setting estimated parameters is of great importance in engineering computations of water supply and sewerage objects from economic, hygienic and ecological points of view.

From the economic point of view it is not efficient to make calculations based on the maximum quality indices values. At the same time orientation to the average values could fail to provide the required quality of the water treatment at certain time intervals. .

Methods of setting estimated water consumption are given in normative documents. Techniques for setting estimated water quality parameters are not well developed, and primarily it concerns the observation period setting and number of measurements necessary to make the sampling representative.

Under these circumstances it is rather difficult for a designer to justify the decision on setting estimated parameters. That is why we suggest that several estimated parameters should be set for each water quality index, the use of which depends on the type of the structure projected.

This paper provides the statistic data on the water quality in the Kinel River at the site of water intake for the town of Kinel (Samara oblast) and the procedure for setting estimated parameters of the river water quality.