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ENERGY SAVING IN WATER TREATMENT TECHNOLOGIES WITH POLYSTYRENE FOAM FILTERS

Abstract

In the article we considered the problem of treating groundwater and surface water for drinking purposes.

The efficiency of whole system work depends on filtration installations in the technological schemes of drinking water preparation. A floating granular filling with expanded polystyrene was first proposed at the Department of Water Supply and Drilling (National University of Water Management and Natural Resources).

In article we showed the structure of polystyrene filters and principle of their work. The authors suggested technological schemes clarifying and discoloration of the surface water in single-stage and two-stage reagent schemes and contact groundwater iron removal with polystyrene foam filters. Described principles of work, parameters and conditions of use the technological schemes. We proposed scheme with hydraulic automatic device with switching modes.

Showed implementation experience developed technological schemes of polystyrene foam filters in the water preparation for drinking purposes and assessed the economic efficiency of proposed solutions.

Key words: clarification and discoloration of water, drinking water, filtering options, iron removal, polystyrene foam filter, technology scheme