ABSTRACT

Master's dissertation: 94 pages, 30 tables, 13 figures, 81 sources.

The purpose of the master's thesis was to conduct research on the modification of ion-exchange materials by compounds having reducing properties for the disinfection of water, as well as determining the effectiveness of the resulting redoxites.

The object of research is the technology of water conditioning for closed water circulation systems.

The subject of the study is the generation and use of modified anion exchangers in the process of water disinfection.

Methods of research - titerometric and potentiometric.

Modification of ion exchangers for the purpose of obtaining redoxites was carried out using low-base anion exchangers Dowex Marathon and AMBERLITEIRA96, high-grade anion exchanger AB–17–8, and also strong-acid cation exchanger КУ–2–8. In the course of the work, the efficiency of the redoxites obtained in the process of disinfection of various types of water was determined.

The dissertation presents an overview of the methods of water conditioning, presents the disadvantages and advantages of modern methods of water disinfection. The main methods of ion exchange modification are given.

The anion exchangers AB–17–8, Dowex Marathon, AMBERLITE IRA 96 with compounds having the reducing properties, namely, SO_3^{2-} and HSO_3^- was studied the possibility of modifying; the anion exchangers AB–17–8 and Dowex marathon in SO_3^{2--}form, on the concentration and composition of solutions of sulfite and sodium bisulfite and anion exchange forms was evaluated the dependence of the sorption capacity; the influence of the concentration of chlorides, sulphates in water on the desorption of sulfite anions from anion exchangers AB-17-8 and Dowex Marathon was estimated.

DEOXYGENATION, REDOXIT, MODIFICATION OF IONITES, SORBTSION, DESORBTION, ANIONITE