



The study of environmentally friendly pretreatment system

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ABSTRACT

The Mitsubishi Heavy industries, Ltd. has been challenging the development of a chemical-free pretreatment. In this paper, we will present our experience of the field tests. The test results turned out to be very successful and proved that the chemical-free pretreatment is applicable for reverse osmosis seawater desalination. Chemical-free rapid sand filtration especially is the most promising process, which has been applied as a pretreatment system of salt manufacturing works in Japan and worked in condition for more than 40 years. Although the exact mechanism has not been identified, the performance of this system seems to be related to the microbial activity. It is hoped that this pretreatment system will solve the environmental problem that is caused by a seawater desalination plant.

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