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The study of environmentally friendly pretreatment system

Kazuhisa Takeuchi^a, Yoshiaki Ito^{b,*}, Kiichi Tokunaga^c, Masahiko Nagai^b, Hideo Iwahashi^d

^aMitsubishi Heavy Industries, Ltd., 1–8-1, Sachiura, Knazawa-ku, Yokohama 236–8515, Japan
^bMitsubishi Heavy Industries, Ltd., 5–717-1, Fukahori-machi, Nagasaki 851–0392, Japan
Tel. +81 95 834 2160; Fax: +81 95 834 2165; email: yoshiaki2_ito@mhi.co.jp
^cMitsubishi Heavy Industries, Ltd., 1–1, Akunoura-machi, Nagasaki 850–8610, Japan
^dMitsubishi Heavy Industries, Ltd., 3–1, Minatomirai 3-chome, Nishi-ku, Yokohama 220–8401, Japan

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ABSTRACT

The Mitsubishi Heavy industries, Ltd. has been challenging the development of a chemicalfree 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.

Keywords: Pretreatment; Environmental friendly; Media filter

^{*}Corresponding author.

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