CLAIMS

[Claim 1]

A method for operating a desalting apparatus having a first desalting apparatus and a second desalting apparatus, the method comprising:

a normal operation step of supplying water to be treated to the first desalting apparatus to separate a first concentrated water and a first desalted water, and supplying the first concentrated water to the second desalting apparatus to separate a second concentrated water and a second desalted water; and

a recovery operation step of supplying water to be treated to the first desalting apparatus to separate the first concentrated water and the first desalted water, and passing a dilute water having a lower concentration than the first concentrated water and less than a saturated solubility through the second desalting apparatus for 10 to 60 minutes to dissolve a scale adhered to the second desalting apparatus and to recover the desalting performance of the second desalting apparatus.

[Claim 2]

The method for operating a desalting apparatus according to claim 1, wherein a plurality of the second desalting apparatuses are installed in parallel, and while the normal operation step is performed in some of the second desalting apparatuses, the recovery operation step is performed in other second desalting apparatuses.

[Claim 3]

The method for operating a desalting apparatus according to claim 1 or 2, wherein the water to be treated is used as the dilute water.

[Claim 4]

The method for operating a desalting apparatus according to claim 1 or 2, wherein the desalted water of the first desalting apparatus is used as the dilute water.

[Claim 5]

The method for operating a desalting apparatus according to any one of claims 1 to 4, wherein a scale preventing agent is added to the dilute water.

[Claim 6]

The method for operating a desalting apparatus according to any one of claims 1 to 5, wherein the first desalting apparatus and the second desalting apparatus are reverse osmosis membrane apparatus.

[Claim 7]

The method for operating a desalting apparatus according to claim 6, wherein a rate of water passing of the dilute water is 0.001 to 0.1 m/s.

[Claim 8]

The method for operating a desalting apparatus according to any one of claims 1 to 7, wherein the water quality of the first concentrated water is any of the following a to c:

a. a calcium ion concentration of 0.1 to 10 mg/L, and a fluoride ion concentration of 3000 to 8000 mg-F/L;

b. a calcium ion concentration of 500 to 1500 mg/L, and a fluoride ion concentration of 50 to 150 mg-F/L;

c. a calcium ion concentration of 400 to 1500 mg/L, and an M alkalinity of 800 to 2000 mg/L.

[Claim 9]

The method for operating a desalting apparatus according to any one of claims 1 to 8, wherein the first concentrated water is a concentrated water obtained by concentrating the feed water of the first desalting apparatus at a concentration ratio of 3 or more.