

MEMBRANE DISTILLATION DEVICE AND METHOD FOR OPERATING SAME

ABSTRACT

A liquid-being-processed inside a feed-water tank 1 is supplied to hollow fibers 11 of a membrane module 10 by a feed-water pump 2, a pipe 3, a heat exchanger 4, and a pipe 5 and returns to the feed-water tank 1. A secondary side 17 is depressurized by a pressure reduction device 25. Water of the liquid-being-processed flowing through the hollow fibers 11 evaporates and is suctioned and discharged from the secondary side 17 to a pipe 20. A gas phase part 1a of the feed-water tank and the secondary side 17 communicate with each other through a pipe 7 and a valve 8, and a differential pressure $P_1 - P_2$ therebetween is 20 to 90 kPa.

Figure 1