

Draw solution reconcentration for forward osmosis desalination with ammonium bicarbonate

김영*, 이공훈, 이종훈, 오동욱, 이정호
한국기계연구원
(ykim@kimm.re.kr*)

Ammonium bicarbonate decomposes into carbon dioxide and ammonia during fresh water production in forward osmosis desalination. The gas mixture generated from the separation process should be captured back to the system to operate the system at a steady state. Otherwise, ammonium bicarbonate should be constantly added to the system. The reconcentration process is designed on the basis of lab-scale experimental results. Two types of processes are proposed and the efficiencies are evaluated by lab-scale experiments.