

Desalination technology using gas hydrate

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Water scarcity have become a worldwide issue. Desalination attracts attention as a method for solving the water shortage. Thus seawater desalination technology using gas hydrate has gotten a lot of attention anew.

The desalination technology using gas hydrate has competitive maintenance cost than distillation widely used methods. And It need a lower pressure than the pressure required to SWRO. Selection of guest gas is important for developing seawater desalination technology using gas hydrate. In order to select the guest gas, phase equilibrium measurements hydrate is required for each gas. QCM method is a device which is very effective to measure the phase equilibrium of gas hydrate.[1] Therefore, it is possible to measure quickly the phase equilibrium of the collected gas by using a QCM method.

Three kinds of guest gases were selected for candidate and then each gas was checked phase equilibrium conditions for seawater collected in East Sea and primary concentrated water which has flowed through the SWRO.

[1] *Energy Fuels*, 2012, 26,767