Separation of water through gas hydrate formation

Gas hydrate is normally recognized as a troublemaker in the oil and gas industry. However, gas hydrate has some interesting possibilities when used in connection with separation of water. Nordic Sugar has investigated the possibility of using gas hydrates for concentration of sugar juice. The goal of the project was to formulate an alternative separation concept, which can replace the traditional water evaporation process in the sugar production. Work with the separation concept showed that gas hydrates can be used for water separation. The process is not suitable for sugar production because of large volumes and the needs for high pressure. The process could be interesting for concentration of heat sensitive, high value products.

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