

DESALINATION

Offshore advances could help in droughts

By Matthew Tresaugue

The Ancient Mariner saw water everywhere, but not a drop to drink.

Modern offshore workers are more fortunate, surrounded by oceans of drinking water.

The same platforms that produce oil also turn seawater into freshwater by filtering it through fine membranes in a complex process called reverse osmosis.

While the process is not new, the systems on display at the Offshore Technology Conference are efficient enough to hold the possibility of desalination as a source of water in drought-prone regions across Texas and the U.S.

The technology used for offshore oil and gas operations can produce tens of thousands of gallons of water a day for drinking, bathing and washing decks, said Dan Grommersch, vice president of sales for Aqua-Chem, a

Reverse continues on M4



James Nielsen / Houston Chronicle

A Village Marine Tec DW-6000-DP water maker could be seen at the Green Marine booth at the Offshore Technology Conference.

Reverse osmosis gains in offshore industry

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Knoxville, Tenn.-based company that sells reverse-osmosis systems.

"Most everyone is going to reverse osmosis," he said, noting the process also can purify brackish and polluted water.

Offshore platforms require 70 to 100 gallons of water per person per day, said Lance Ranlett, sales manager at Green Marine and Industrial Equipment Co.

Houstonians each average 140 gallons per day, according to state data.

The reverse-osmosis process uses filters and synthetic membranes to separate salts and impurities from seawater.

About half the water is purified and used on the rig. The other half is a salty concentrate, which is flushed back out to the ocean.

The process is less expensive than transporting fresh water to offshore facilities, and it reduces weight and storage requirements. It also prevents interruptions to work schedules by providing a reliable water

supply. But it carries the ongoing cost of replacing filters and membranes.

Some production platforms continue to employ older steam-based systems to distill ocean water — using waste heat to vaporize it, then condensing the steam into pure water free of salt and particles.

"This is the technology of 15 years ago, but people are looking at it again," Ranlett said. "There is less cost and less maintenance."

matthew.tresaugue@chron.com
twitter.com/mtresaugue