

# WATER DESALINATION REPORT

The international weekly for desalination and advanced water treatment since 1965

Volume 50, Number 22

9 June 2014

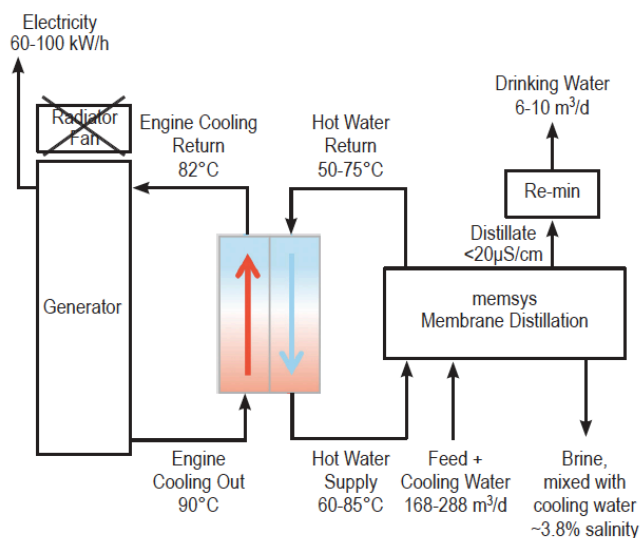
## Maldives

### DISTILLER IMPROVES GENERATOR EFFICIENCY

After three full months of operation, memsys' Florian Bollen told *WDR* that a small, potable water treatment plant on the Maldivian Island of Gulhi has succeeded in producing "energy positive desalination" for the island's 1,200 inhabitants. According to Bollen, his company's vacuum membrane distillation (V-MEMD) technology and diesel generators have combined to produce 10 m<sup>3</sup> (2,642 gallons) of drinking water and hundreds of additional kWh's of electricity per day from the same amount of diesel.

"The V-MEMD unit not only produces high-quality distillate, it increases the efficiency of the generator by improving the jacket water cooling and has eliminated the parasitic load of a cooling fan. It actually provides a positive energy balance in addition to desalinating seawater. Since the memsys unit was installed, the system has operated at an uptime of over 99 percent with an increase of more than 16 percent in the generator's energy efficiency than it had when air cooled.

"The desal plant consumes about one percent of the electrical energy produced, which equates to an average 3.04 kWh per liter of diesel with water cooling versus 2.63 kWh/L with air cooling," said Bollen.



*Gulhi Island seawater desal and power generation unit*

Besides identifying up to 20 similar small-scale municipal applications on other Maldivian islands, the company is targeting other touristic resorts with flows ranging from 100 to 1,000 m<sup>3</sup>/d, including several deals that it said were closed during last week's Singapore Water Week.