



# STAGE 1 DESALINATION PROJECT IN THE MIDDLE EAST

Filtersafe Case Study



## BACKGROUND & CHALLENGE

A Middle Eastern Water Company put out a tender for UF Pre-Treatment for a new seawater desalination plant to supply potable water for almost 1 million people.

**UNIQUE CHALLENGES:** The need was for high flow filters that can maintain a flow of 5000m<sup>3</sup>/hr (per filter), designed to withstand temperatures up to 85°C that work reliably outdoors in the hot Middle East climate, and to operate continuously, 24 hours a day, 365 days a year.

Prior to primary treatment, which is a DAF, the raw seawater has a TSS ranging from 35-50 ppm. The role of the filters is to protect the downstream UF from solids at sizes of 200µm and above.

## INDUSTRY

Desalination

## APPLICATION

UF Pre-Treatment

## FILTERSAFE

- 30 years filtration experience
- 3,000+ installations
- 10µm upwards & 50-6,840 m<sup>3</sup>/hr.
- Modular filter technology

## FILTERSAFE SOLUTION

Filtersafe recommended 7 Horizontal 30" FS-804 automatic screen filters (6 operational + 1 standby).

|                             |  |
|-----------------------------|--|
| <b>Filtration degree</b>    | 180µm, <b>smartweave</b> <sup>TM</sup> multi-layered sintered screens                                  |
| <b>Flow rate</b>            | 28,800 m <sup>3</sup> /h, (4,800 m <sup>3</sup> /h each)   |
| <b>Client</b>               | Doosan   |
| <b>Filter Body</b>          | ASME design, Carbon Steel body with external high temperature Epoxy Coating and internal Rubber Lining |
| <b>Screen and Internals</b> | 7 x SMO 254 Screens with a total 560,000cm <sup>2</sup> screen area and Super Duplex internals         |

## BENEFITS TO CUSTOMER

Filtersafe successfully won the tender with our partner on the project, thanks to the following benefits:

1. Filtersafe's expertise in seawater filtration due to decades of experience in the seawater filtration market and many desalination projects under our belt.
2. Financial and logistical savings due to the horizontal option of our filters against the only vertical layout of our competitors which bring with them higher costs for service and maintenance.
3. Our cutting-edge patented filtration technology **smartweave**<sup>TM</sup> + **nozzle**<sup>TM</sup> = **EVERCLEAR**<sup>TM</sup>. The client indicated that after researching the market, Filtersafe offered the best filtration technology.
4. Filtersafe filters, with unique screen design and patented cleaning nozzles have proven to be more efficient and reliable in filtering the seawater with variable organic material and suspended particles, even in high dirt loads.
5. Our filters can operate constantly & work at high operating pressure conditions.





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