



Designing for Middle East sand and dust storms

Multinational oil company, Syrian desert

Case story

A crude oil facility was looking for a way to capture valuable hydrocarbon vapor streams which were being treated as a by-product and sent to flare. Other challenges were the harsh conditions of fine dust and sand storms and lack of clean water at this Middle East facility.

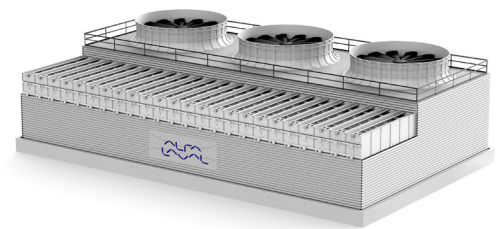
Multiple Alfa Laval Wet Surface Air Coolers were designed to cool and condense the high pressure hydrocarbon liquid, gas, and propane vapor streams—allowing them to be sent to a pipeline.

The WSAC units were custom engineered for 25+ years operating life in harsh desert conditions. Brackish water from the Euphrates River was used as make-up for spray water. The sprays wash sand in the air over the tubes and into the catch basin. The basin incorporated a sloped design with a collection trough at one end for ease of sand removal. Vacuum doors were installed at the trough end of the basin walls for removal of sand with a vacuum truck. Ports were also provided at the opposite end of the basin for periodic hose down of sand to the trough end of the basin.



Results

- WSAC designed for harsh desert conditions
- Achieved desired outlet temperature during hottest desert conditions, +130°F (54.44°C) ambient.
- Used brackish river water as makeup due to FlexWater benefit.



WetSurface
Maximum cooling efficiency and lowest possible outlet temperature.



FlexWater
A WSAC can operate on recycled water of low quality such as blowdown water.

Learn more at www.alfalaval.com/wsac

Why Alfa Laval Wet Surface Air Coolers (WSAC)

Maximize uptime

- High reliability
- Minimal maintenance

Cut costs

- Minimal energy consumption
- Reduced maintenance costs

Increase capacity

- WSAC maximizes cooling performance for increased production

How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com.

Alfa Laval reserves the right to change specifications without prior notification.

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