



## Refinery wastewater cooler expansion

### Niagara Wet Surface Air Coolers (WSAC®) case study



#### International oil company

**Location:** Gulf Coast

**Application:** Wastewater cooling

#### The challenge

A customer already using a Niagara WSAC needed to achieve a 40% increase in wastewater cooling requirement.

#### The solution

A Niagara WSAC extended basin was designed and added to meet the increased cooling demand.

#### Advantages

- Steel basin and casing extensions for collecting spray water and supporting added-on tube bundles

- Added-on tube bundles for increased capacity built to original specifications
- Ability to upgrade original fan drive & spray pump equipment for increased demands. Factory supervision available to assist modifications. Design assistance for modification and installation available.

#### What is a WSAC?

Alfa Laval Niagara Wet Surface Air Coolers (WSAC®) are efficient closed-loop, evaporative cooling systems designed for the power, process, wastewater, natural gas and petrochemical industries.

These fluid cooling and vapor condensing systems are optimized for industrial applications where rugged designs, and cost-effective, efficient closed-loop cooling and condensing duties are required.

## Refinery wastewater cooler expansion



1. Preparing existing cooler for expansion



2. Extended basin added



3. Additional tube bundle installed



4. Expansion of existing cooler complete

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