

NIAGARA BLOWER SOLUTIONS

What is WSAC®?

The Wet Surface Air Cooler is a closed-loop, evaporative cooling system.

Wet Surface Air Coolers are optimized for industrial applications where rugged design/fabrication and cost effective efficient closed-loop cooling/condensing are required.

Applications:

Liquid Cooling
Gas Cooling
Vapor Condensing

Industries:

Refining
Power
Wastewater
Pulp & Paper
Metals
Mining
Food/Beverage

CASE STUDY

WSAC® PROPYLENE CONDENSER AT U.S. GAS PLANT

Customer: **INTERNATIONAL PETROCHEMICAL COMPANY**
Installation Location: **SOUTHWESTERN U.S.**
Application: **PROPYLENE CONDENSING**

THE CHALLENGE Customer needed to condense propylene fractionation refrigerant to a temperature within 15° of ambient wet bulb.

THE SOLUTION A Wet Surface Air Cooler was determined to be the most cost-effective system when compared to cooling towers and fin fan air coolers, since the propylene is condensed directly in the tube bundles, and required less horsepower. Also, this allowed the customer to downsize compressor equipment.



WSAC® ADVANTAGES

- Significantly lowers compressor HP requirement by lower operating/condensing pressure
- Increases fractionator efficiency and output by running at cooler temperatures during hot months
- Condensing based on single approach to ambient wet bulb
- Ability to use existing cooling tower blowdown as makeup to the WSAC, adding another benefit of not having to find a new water source



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