



Improve cooling duties while reducing fresh water consumption

Niagara Wet Surface Air Coolers (WSAC®) application study



The challenge

Improve cooling duties in an existing power plant and reduce fresh water consumption and blowdown.

The solution

Use blowdown from an existing cooling tower as makeup water in a Niagara Wet Surface Air Cooler (WSAC®).

Advantages

- Increase cooling duties
- Reduce fresh water consumption
- Improve existing cool tower capacity

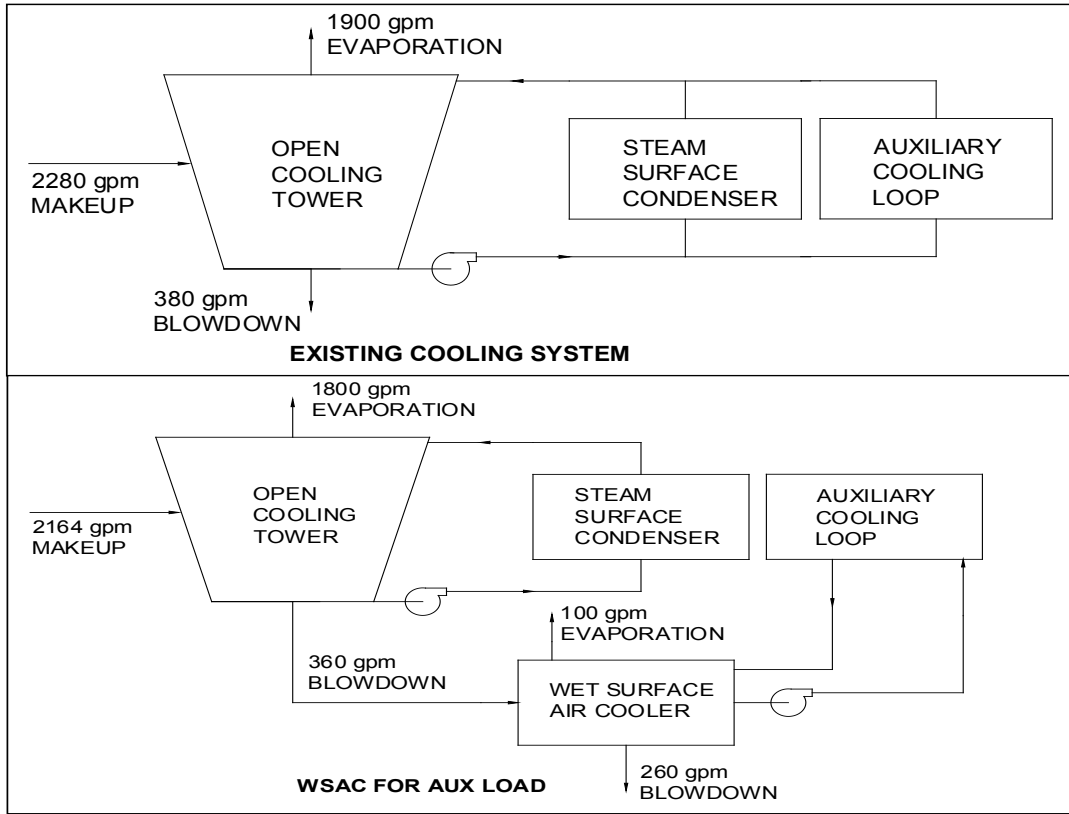
- Increase power plant output
- Reduce total system makeup water and blowdown

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.

Application diagram



57 MILLION GALS / YEAR SAVED IN MAKEUP & BLOWDOWN

| | WATER FLOW RATES | | ASSUMPTIONS: |
|-----------------|------------------|----------|--|
| | MAKEUP | BLOWDOWN | |
| EXISTING SYSTEM | 2280 gpm | 380 gpm | <ul style="list-style-type: none"> • 525 MW COMBINED CYCLE PLANT • 6 CYCLES OF CONCENTRATION IN OPEN TOWER • 8000 HRS/YR OF OPERATION |
| MODIFIED SYSTEM | 2160 gpm | 260 gpm | |
| REDUCTION | 120gpm | 120 gpm | |

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

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