



FOOD INDUSTRY

Food Processing Condenser Treatment Case Study

Yakima, Washington, USA

Hydropath treatment controlled scale, biological growth and corrosion across two condensers while eliminating chemical treatment and reducing blowdown.

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Chemical Treatment

<1 mo

Blowdown Frequency

<1,600µS

Conductivity Maintained

~1 year

Estimated ROI



BEFORE & AFTER

BEFORE

- Chemical treatment required
- 1/8" hard scale on BAC tubes
- Scale and bio growth on EVAPCO fins

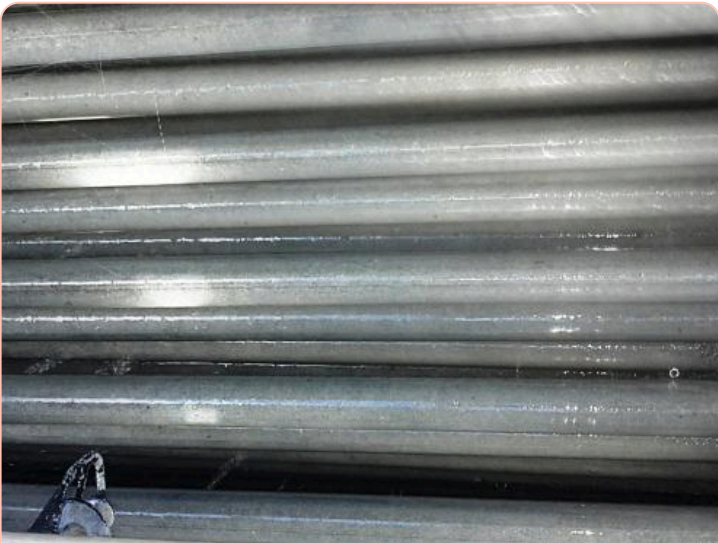
AFTER

- ✓ Chemical treatment eliminated
- ✓ 1/32" soft scale, easily wiped off
- ✓ Fins cleared within three weeks



BEFORE

BAC tubes with 1/8" hard scale



AFTER

BAC tubes with 1/32" soft scale

OVERVIEW

G & G Orchards in Yakima, Washington operated BAC and EVAPCO condensers feeding a common sump. Scale, biological growth and corrosion affected the cooling systems despite chemical treatment. A 12-month evaluation assessed whether Hydropath treatment could control these problems while eliminating descalant, biocide and anti-corrosion chemicals.

CHALLENGE

Scale, biological growth and corrosion persisted despite chemical treatment.

- Hard scale accumulated on BAC heat-exchange tubes
- Scale and biological growth affected EVAPCO condenser fins
- Scum, biological growth and corrosion affected the common sump
- Descalant, biocide and anti-corrosion chemicals were required

SOLUTION

A *HydroFLOW*® P100 was installed on the BAC Condenser in September 2011, followed by a P120 on the EVAPCO Condenser in March 2012. Both were fitted at the common sump discharge.

UNITS INSTALLED

1x *HydroFLOW*® P100 + 1x *HydroFLOW*® P120

SYSTEM

BAC + EVAPCO condensers, common sump

INSTALLATION DATES

20 Sep 2011 + 1 Mar 2012

EVALUATION PERIOD

12 months



INSTALLATION

P100 and P120 at sump discharge



SITE

BAC and EVAPCO condensers



MONITORING

Cooling-tower conductivity meter

RESULTS



Chemical Treatment Eliminated

Chemical use stopped during the evaluation and remained discontinued.



Minimal Blowdown

Blowdown was reduced to less than once a month throughout monitoring.



Conductivity Controlled

Conductivity remained below 1,600 µS throughout the 12-month evaluation.



Scale Became Easy to Remove

BAC tubes changed from 1/8" hard scale to 1/32" soft, wipeable scale.



Fins Cleared in Three Weeks

Scale was gone and biological growth was being eradicated after three weeks.



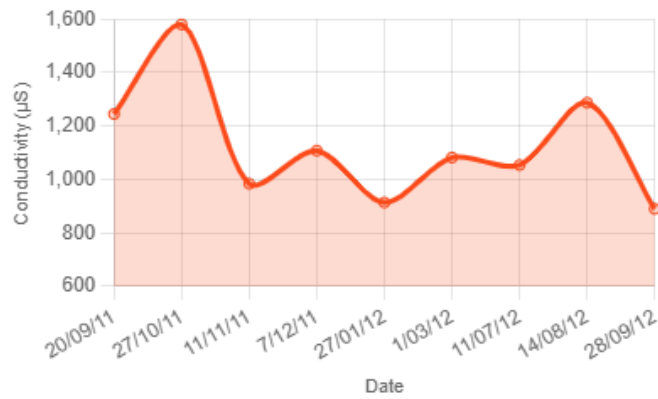
ROI of Roughly One Year

Chemical, water and maintenance savings produced an ROI of roughly one year.



GRAPHS

Conductivity During the 12-Month Evaluation



Conductivity remained below 1,600 μ S throughout the 12-month evaluation with minimal blowdown.



TESTIMONIAL

"My cooling towers were never this clean when they were on chemicals."

— G & G Orchards owner

KEY TAKEAWAY

Chemical-Free Condenser Control

Two *HydroFLOW*® units treated the BAC and EVAPCO condensers over 12 months. Chemical treatment was eliminated, blowdown fell below once a month and conductivity remained controlled. Scale became soft and removable, with an estimated ROI of roughly one year.

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CHEMICAL TREATMENT

<1/mo

BLOWDOWN FREQUENCY

~1 year

ESTIMATED ROI



ADDITIONAL PHOTO EVIDENCE



BEFORE

EVAPCO fins with scale and biological growth



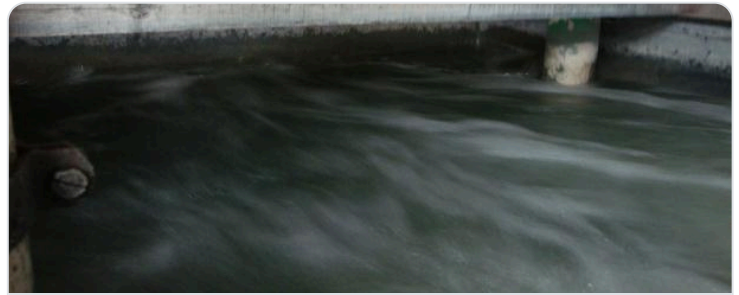
AFTER

EVAPCO fins three weeks after P120 installation



BEFORE

Common sump with scum, bio growth and corrosion



AFTER

Common sump after nine months without chemicals

RELATED CASE STUDY

McCain Potato Fries Factory Case Study

Lewedorp, Netherlands

HydroFLOW® units were installed at the McCain potato processing factory in the Netherlands, dramatically extending maintenance intervals from 500 to 1,500 hours and eliminating the need for acid cleaning since installation, resulting in a 6x reduction in cleaning frequency.

3x Longer Intervals

Maintenance intervals extended from 500 to 1,500 operating hours

No Acid Cleans

Complete elimination of acid cleaning procedures since installation

6x Less Cleaning

Dramatic reduction in overall cleaning frequency and downtime

HYDROPATH 

Ready to reduce cooling-system chemical use?

Talk to HydroPath about scale, biological growth and corrosion control.

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