



● COMMERCIAL HEATING/COOLING

City Water Chiller Case Study Hong Kong

HydroFLOW® reduced existing scale buildup in a city water cooled chiller system and improved chiller energy efficiency by 16%.

16%

Efficiency Improvement

1 yr

Scale Reduction Evaluation



Existing Scale Buildup



Maintenance Demand



BEFORE & AFTER

● BEFORE

- Condenser tubes cleaned with acid yearly
- Cooling towers cleaned twice yearly
- Scale buildup lowered chiller efficiency

● AFTER

- ✓ Existing scale deposits reduced
- ✓ Chiller efficiency improved by 16%
- ✓ Chiller operation remained stable



BEFORE

Scale deposits before treatment



AFTER

Condenser tubes after treatment



OVERVIEW

A global bank building operated two freshwater cooled chiller units with a cooling capacity of 180 TR each to support its server room cooling systems. City water below 30mg/L hardness was treated using inhibitors and biocides. Condenser tubes required annual acid cleaning while cooling towers needed cleaning twice yearly. Hydropath treatment was installed to reduce scale buildup and improve chiller efficiency.



CHALLENGE

- Frequent cleaning and scale buildup reduced cooling efficiency.
- Condenser tubes required annual acid cleaning
 - Cooling towers needed cleaning twice yearly
 - Scale buildup reduced heat transfer efficiency
 - Continuous chemical treatment was required



SOLUTION

A *HydroFLOW*® unit was installed to reduce scale deposits and improve chiller efficiency.

UNIT INSTALLED

1x *HydroFLOW*® unit

APPLICATION

City water cooled chiller system

COOLING CAPACITY

2× 180 TR chillers

INSPECTION PERIOD

1 year after installation



RESULTS

↗ Efficiency Increased

Chiller efficiency improved by 16%

🛡 Existing Scale Reduced

Inspection after 1 year showed scale reduction

🔧 Maintenance Reduced

Cleaning requirements reduced after treatment

🌡 Improved Heat Transfer

Clean condenser improved performance

📦 Chemical Dependence Lowered

Lower dependence on treatment chemicals

🔄 Stable Server Cooling

Cooling system operation remained stable

KEY TAKEAWAY

Summary

HydroFLOW® treatment improved the performance of a city water cooled chiller system serving a global bank building in HongKong. After one year of operation, existing scale deposits were reduced and chiller efficiency improved by 16% while maintaining stable server room cooling

16%

EFFICIENCY IMPROVEMENT

1 yr

SCALE REDUCTION EVALUATION



MAINTENANCE DEMAND

HYDROPATH

Ready to eliminate chemical dosing?

Get a free consultation for your facility.

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