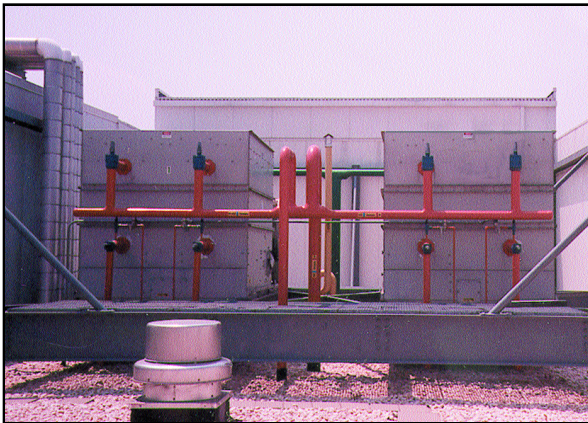


TRIANGULAR WAVE Fact Sheet

TRIANGULAR WAVE SYSTEM PROTECTS REFRIGERATION COOLING SYSTEM AT SYSCO'S MAJOR FOOD DISTRIBUTION WAREHOUSE

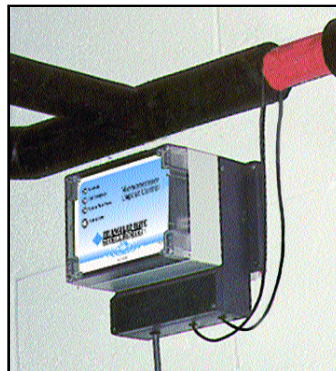
The SYSCO Foods distribution warehouse in Harrisburg, PA uses an ammonia refrigeration system to cool a refrigerated warehouse. The refrigeration system is cooled by twin 250 ton Baltimore Air Coil Evaporative Condensers. The warehouse and cooling system are three years old.



Twin BAC Evaporative Condensers

The cooling system is protected by two **Triangular Wave Deposit Control Systems**. One System is installed as part of a Total Water Control System (TWCS), that has filtration, deposit control, and ionization (disinfection) components. The TWCS is designed to remove large suspended particles, control scale and biofilm deposits, and kill bacteria and algae.

The second Triangular Wave System is attached to the makeup water pipe for the evaporative condenser system. That unit initially treats the incoming water to enhance the surface charges of the scale and biofilm particles. The enhanced surface charge causes the particles to repel each other and the



Triangular Wave System on Incoming Makeup Water Line

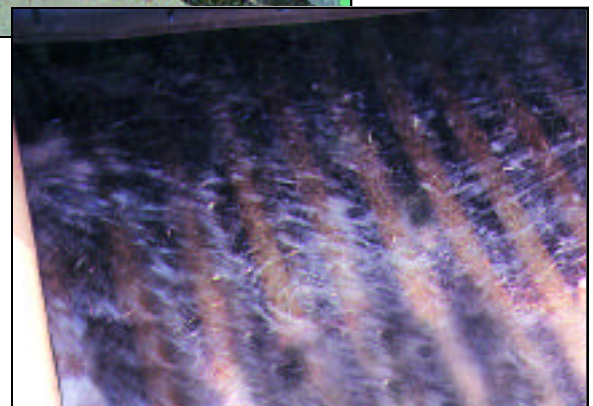
surfaces of the machinery, and disperse into the water. The proof of the effectiveness of the Triangular Wave Systems is the scale free evaporative condenser coils. Scale free after three years. The Director of Maintenance reports that SYSCO does not spend any money on chemical treatment or deposit removal maintenance.

Estimated chemical cost savings – \$10,000 per year.
Estimated maintenance cost savings – \$5,000 per year.

Annual water costs and sewer costs may be reduced by 50% or more by reducing the blowdown and allowing the concentration ratio to rise. Hidden costs due to downtime and extra cleaning have been reduced as well. The **Triangular Wave System** has proven to be effective from an operational, economic, and safety point of view.



Triangular Wave System Part of TWCS System



Scale Free Coils in Evaporative Condenser