

Water filter reduces costs at plastics plant



Rehrig Pacific Company is the world's largest manufacturer of returnable plastic crates and pallets for handling and transporting food and beverage products. Rehrig also manufactures a full line of roll-out carts and bins for curbside collection of household waste and recyclables. The company operates five manufacturing plants located in California, Georgia, Kansas, Wisconsin and New Hampshire.

Two years ago, Rehrig Pacific's Los Angeles plant was facing production problems caused by clogs in the water pipes used to cool the plastic during the manufacturing process. The cooling towers, located outside in the parking lot, were collecting dirt which was being carried inside the production plant by water that was running through valuable heat exchangers and condensers.

"I had to stop production every other week for several hours to clean the lines," said Alfredo Romero, maintenance manager at Rehrig Pacific's Los Angeles plant. "One time, I lost a condenser when it got clogged with dirt, became impacted with ice, and broke off." Romero says a condenser costs

about \$5,000, but the downtime caused by frequent cleanings was taking an even greater toll on the company's productivity.

Rehrig Pacific installed one 4" water filter in the tower. Results were so positive that the company purchased seven more filters for the Los Angeles plant and additional filters for the Georgia, Kansas and Texas plants. Romero now says he no longer has to worry about dirty water clogging the lines, destroying valuable equipment and interrupting the production process.

Contamination of pipes and heat exchange surfaces lowers the thermal efficiency of the system and wastes energy by requiring a higher flow rate of cooling water. Contamination also increases friction losses by inducing erosion and corrosion. Filtration is one of the simplest and most convenient ways to solve these problems.