

## Honeywell water treatment system solves costly scaling problem at Mountain Place Towers.



At Mountain Place Towers, a large Montreal apartment complex, building management was faced with problems of maintaining proper comfort levels with existing HVAC equipment.

Scaling seriously affected operating efficiency

Plumbing consultants advised that the piping serving both the cooling and heating systems was badly scaled and because it was so old it could not be cleaned in the conventional manner, with acid or by mechanical means. It would have to be replaced.

"The estimate for retrofitting was a budget-breaking number," said Ivanusech. "I had to find an alternative, less expensive solution to the problem. I decided to get a second opinion and called in Honeywell building Services."

Honeywell's Montreal-based Normand Viens agreed that scaling had reduced

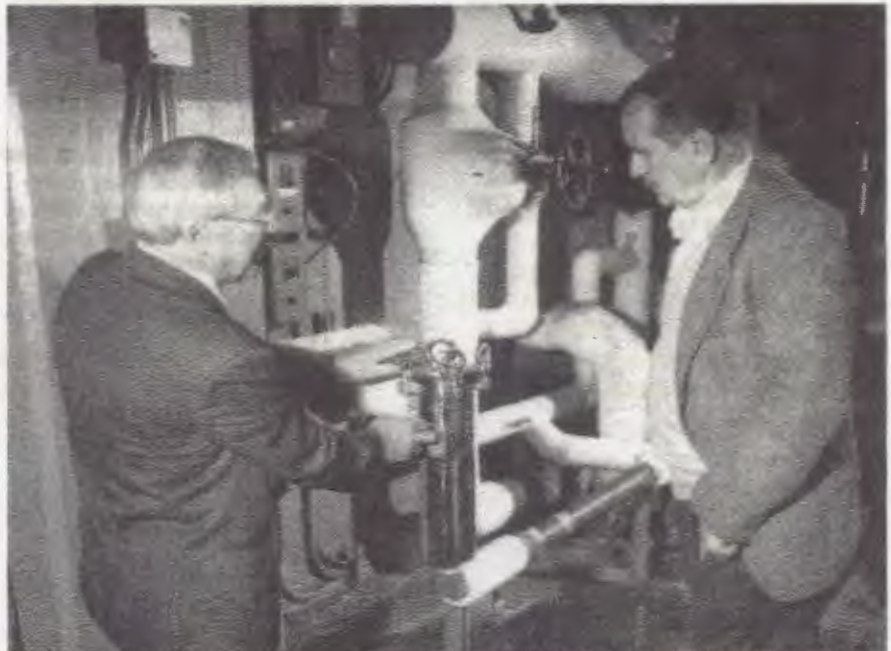
the inner diameter of the piping considerably, which would restrict the flow of process water to both the cooling towers and the boilers and would seriously affect their operating efficiencies. According to Viens, However, replacing the piping was not necessary. What's more, installing new piping would not address the fundamental problem of scaling.

"Water contains calcium and magnesium," he notes. "When water is heated or evaporated, calcium carbonate (scale) forms on the walls of the pipes and restricts water circulation. For decades, maintenance personnel have used chemical additives to soften the water in an attempt to prevent scaling, but to no avail. Time has proved that

Maintaining the atmosphere in an apartment building to the satisfaction of the tenants when the cooling and heating systems are functioning efficiently is a challenge in itself. But when the effectiveness of the equipment deteriorates to such a degree that it becomes impossible, then that challenge turns into an exasperating chore.

That was the situation plaguing Joe Ivanusech, superintendent of building maintenance operations at the Mountain Place twin-apartment towers in Montreal, during the summer of 1989.

"Trying to maintain an acceptable, air-conditioned comfort level in the 178 suites comprising these buildings was impossible," says Ivanusech. "I just could not get the chilled water temperature below 48°F when it needs to be 42°F."



Normand Viens, Honeywell Building Services representative discusses the Mag-O-Pure operation with Joe Ivanusech, Building Superintendent for the Towers. The technology of the system uses magnetic field force to influence the behaviour of colloidal particles.

although the chemicals do retard the scaling action, they do not eliminate it."

### Magnetic technology solves costly problem

"Honeywell is marketing a new water treatment system that employs magnetic technology rather than chemicals to control the behavior of process waters. Viens informed Ivanusech. "It will cost a fraction of the sum quoted for the piping retrofit and will definitely prevent scaling."

The Honeywell method uses the Mag-O-Pure Water Treatment System; a new, non-electric multi-polar permanent magnet method that alters the cohesive energy of calcium and magnesium salts by influencing their colloidal behavior.

The crystals remain in suspension, rather than building up on the walls of pipes. This allows them to be picked up by the special Mag-O-Pure filter incorporated in the water circuit.

### Comfort levels quickly improved for tenants

Mag-O-Pure systems were installed at the Mountain Place Towers and operated throughout the summer of 1990.

"It was one of the warmest, most humid summers we've experienced in quite a few years," recalls Ivanusech. "A sure test of any air-conditioning system. I had no trouble maintaining the chilled water at 42°F. It was incredible! After only two months in operation the system performed just as Viens said it would do."

The feedback from the tenants was equally favourable. All agreed that it was the most comfortable summer living environment they had enjoyed in their apartments in a long time.

Building Services Division  
Honeywell Limited  
740 Ellesmere Road,  
Scarborough, Ontario, M1P 2V9

A1357-12/90



*Minerals and impurities remaining in suspension in the water are removed by filtration. Filters are easily replaced.*

### Overall results were better than expected

"Operating costs have also reduced considerably," comments Ivanusech. "Blowdown frequency is now once every three weeks rather than daily as in past years. Maintaining the pH level of the water is much easier. There is no expenditure on chemicals any more. The compressor doesn't have to work as hard now and that represents quite a saving in energy costs. There is no build up of scale on the pipes. And the water in the system at 5 microns is cleaner than it's ever been."

"I also have peace of mind knowing that the tenants are happy and that I receive compliments rather than complaints on the building's comfort level."

"I am extremely pleased with the decision I made" says Ivanusech. "Results to date are much better than I had expected."

# Honeywell

Helping You Control Your World