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Hot Water Tank Failure!

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Many times in presenting the concept of water management to Strata Condos, the question of hot water tank or hot water line failure comes up as the Strata has recently been through an expensive replacement. There question is why? “It wasn’t that long ago it was done”.

The common factor in all hot water tank and heating system installations is **“What type of water quality is in the community the tanks are being installed.”** Each City or community experiences different levels of success or failure with the life expectancy of their hot water system. In the **Greater Vancouver region**, hot water tanks and heating systems are exposed to very soft rain water which can be very corrosive to the life of the tanks and take responsibility for their short life. Water reacts chemically with the metal parts of the hot water tanks. Corrosion and pre-mature tank failure are attributed to acidity in the water, conductivity, high dissolved oxygen and temperature.

When hot water is being heated, the motion of the water causes tiny electrical currents to form. The movement over exposed metal with water that is acidic, soft and high in oxygen causes tiny fractures in the lining of the tanks as the gas expands and contracts the metal surfaces. The low PH of the water literally eats away at the tank. Being 100% soft, there is no protection established on the inside surface of the tank; corrosion and pin holes are the result. Hot water recirculation lines also develop pin holes and leakage.

Condominium properties circulate large amounts of water daily in the system in order to have instant hot water at the taps. Typically hot water lines can be 3” or 4” lines with large amounts of water being used. Hot water tanks are primarily constructed of iron metals. Typically when Hytec Water conducts tests in the water system, significant traces of dissolved iron and copper will be found in the water test. More so than the cold. Since these elements are virtually nonexistent in the City supply, it is reasonable to conclude that the hot water system is experiencing pre-mature failure to the unmanaged conditions of the water or corrosion. City water is extremely well managed for quality and safety for consumption, however, corrosion within your plumbing system is where high rise and low rise condo properties need to look at adding water management to the list in good maintenance of their plumbing system.

Contact Hytec Water for a free water test and report! Hytec Water has an extensive library on the topic of pin hole leaks, how to prevent a costly pipe replacement in PDF files that can easily be mailed to your property manager.

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