

Slip Stream Filtration

Closed hot water heating systems frequently carry small particles. The particles can range in size from small bits of grit to sludge like matter. They can be recognized as a blackish discoloration in the water or as grit in the piping. These are generally the result of the system water being untreated for against corrosion. There are eight types of corrosion of which oxygen-based corrosion and galvanic corrosions are the most common in hot water heating systems.

The particles cause several types of problems. The grit like material strikes the internal surfaces of the piping and erodes them much like sandpaper. The machined surfaces such as pump impellers and zone valve balls experience critical wear, and pipe fittings such as elbows experience a gouging action that thins the inside walls until a hole occurs. The second problem occurs when particulate accumulate in piping to such a degree that the pipe actually becomes blocked and the only remedy is to open the walls to remove and clean the system by hand. Sludge causes the third problem when it starts to blanket heat transfer surfaces. If this occurs in baseboards then the room they service gets cooler. If blanketing occurs in the boiler heat exchanger then less heat exchange occurs resulting in efficiency losses, higher heating bills and heat exchanger over-heating culminating in catastrophic failure of the boiler.

An efficient and economical remedy is to install a small filter canister wear the filter can constantly clean a small stream of water. The result is that over a period of time the entire volume of heating water passes through the filter and is cleaned. A flow indicator beside the filter allows the filter action to be gauged and announces the need to change the filter.