HYDROPATH TECHNOLOGY
PATENTED

Hellesdon Hospital, Norwich Limescale Protection/Water Treatment/Heating

Hellesdon Hospital at Norwich is a mental health hospital that, like many Victorian era hospitals, has a main building with a number of satellite buildings and wards. Norfolk is an area with particularly hard water and as such, presents major problems for the Estates Department with regard to limescale build-up. This affects any heating system that comes into contact with water – so in addition to the Andrews water heaters, there have been recurring problems with the hospital's many tea boilers. This resulted in staff having to perform a descale every year.

The main building of the hospital utilises an ion-exchange water softener system but there are many outbuildings and boiler houses that are not protected. The heating systems in these buildings, along with tea boilers had to be annually serviced by taking them apart and de-scaling by acid flush and physical scraping. Even so, there were periodic breakdowns caused by limescale build up. The Estates Department had previously tried an electronic water conditioner on one of the boiler houses but the results were disappointing.

The Hydroflow Trial

The hospital's Mechanical Supervisor, Tony Bezants had studied the application of electrical fields on liquids and was familiar with the principles. Whilst at the Plumbing and Heating Exhibition (PHEX) in 2001, he met with representatives of Hydropath, the manufacturers of the Hydroflow water conditioning system. Tony purchased a Hydroflow HS38 unit and tried it on a tea boiler as this would allow an at-a-glance evaluation of how the system was performing. Within a very short space of time, Tony could see that limescale was not building up on the elements as it would normally. He then moved the HS38 to the old nursing accommodation block that had a traditional boiler and cylinder heating system. He also purchased a number of HS34 units for tea boilers and a combination boiler (as the output of the HS38 was overkill for such tasks).

These further trials were also successful, so in summer 2002, Tony had a C60 unit, designed for larger and industrial applications, fitted to a stand-alone boiler house powered by over 10 Andrews water heaters.

The Results

The Estates Department team at Hellesdon Hospital no longer have to do an extensive descale of systems every year and there have been no more breakdowns as a result of limescale build up. A simple visual inspection of the elements is all that is required. Another benefit that they have found is that there has been a huge reduction in scale on mixing valves, which saves a great deal of staff time on breakdown and descale. Tony believes the savings made in fuel usage, staff time, chemicals and replacement parts have far out-weighed the cost of the Hydroflow units. Tony plans to add more Hydroflow units to other satellite buildings as budget allows and as part of the hospitals maintenance program. Tony Bezants comments, "I knew the principle of how electrical fields affect the physical properties of water and the Hydroflow technology appeared to be the best application of those principles. Due to the benefits I've seen at work, all but one of my 12 strong team now have Hydroflow units fitted on their systems at home."

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