Scale inhibitors

Scale inhibitors present a far cheaper alternative to dealing with limescale, but opinions vary as to how effective they really are. The difference between scale inhibitors and water softeners is that they break up the limescale and leave it in suspension, rather than eliminating it altogether.

This is done by passing the mains water through powerful magnets which alter the structure of the hard water salts, or by electrolysis where the water passes through a copper cathode and a zinc anode which creates a mild electric current, leaving the limescale in suspension rather than clinging to the surface of the pipes. Some scale inhibitors involve polyphosphate dosing whereby a very small amount of a compound of sodium, calcium, phosphorus and oxygen is added to the water, either in the form of small containers hung in an expansion tank feeding the hot water system, or by a chemical cartridge plumbed into the pipework. Both methods require the chemicals to be replaced every six months.

It is thought that scale inhibitors are more effective where a large volume of water is used on a frequent basis, as it is the action of the running water which promotes the action. They have the virtue of taking up very little room – typically 150–200 mm length of pipe run and are maintenance free. They have a typical life expectancy of at least 10 years.

Filtered drinking water

According to the Drinking Water Inspectorate, drinking water quality in the UK is improving with 98.95% of 2.9 million tests meeting EU standards. However, some people worry about the smell of chlorine, sediments and rust particles affecting taste and prefer to have their water filtered.

There are various jug devices on the market but if a plumbed in solution is required, under-sink cartridges can be fixed into

the mains water supply pipe before entering the sink mixer. Cartridges/filters generally need renewing every six months. See p. 85 for filtered water mixers.

Boiling and chilled water on tap

There are over-sink and under-sink water heaters which can provide boiling water and some can also provide chilled water. It is claimed that they use less electricity than a jug kettle and have the advantage over a kettle of not cluttering the work-top as they are connected to a dual-control tap over the sink.

Sources: WRAS and Salamander Engineering Ltd

Gas supply

Gas pipes should be accessible for leak detection, suspended on clips away from the wall surface and encased in sleeves where passed through walls. They should not touch hot water pipes or electric cables.

Stop cocks should be provided before each appliance and connected to cookers, ovens and hobs with flexible hoses to enable them to be pulled out for servicing.

Where no mains gas is available and gas is the preferred fuel for cooking, this can be provided in the form of propane gas cylinders. This gas has a higher calorific value than mains gas and can therefore be connected to appliances with small bore pipework.

As the propane gas is under pressure, the containers should be positioned outside the house, in free air, away from any heat sources. It is usual to provide twice the number of cylinders required, which allows half to be in use and the other half to be in reserve. This allows time for the empty cylinders to be renewed by the local supplier.