Limescale protection first at Robinsons

Robinsons has its production facilities at Norwich, which is an area of particularly hard water – a notorious production problem for drink and food manufacturers.

The factory has installed the Hydroflow water conditioning system to prevent the build up of limescale on the heat exchangers of the pasteurising system for the Fruit Spring line. This is the first installation that the manufacturers, Hydropath Ltd believe has been used to protect a water and product system.

Hydroflow is a patented system that prevents the build up of all limescale deposits, including calcium carbonate. Hydroflow works by emitting randomly varying electric fields throughout the system. This enhances the precipitation of the bicarbonates from solution to suspension by introducing clusters of ions in the water to act as seed for suspended crystallisation. The resulting suspension therefore does not adhere to pipework or internal surfaces, but is merely 'washed away' with the flow and during blow down.

Hydroflow offers specific advantages such as treating the water both upstream and downstream of the unit. Uniquely, it also protects standing water and is not dependent on water flowing past the unit.

Hydroflow is easily fitted to existing and new systems. The choice of unit required is dependent on the size of the cold water and feed and in turn, the size of the system to be protected. Hydroflow requires connection to the electrical mains, but has low power consumption and the low operating costs will deliver payback in a very short period.

Contact Hydropath Ltd on tel: 0115 986 9966
or visit: www.hydroflow.com

Food and Drink Technology
February 2005

Unique water system saves time and money

Hard water is a particular problem in the manufacture of drink and food, involving the addition of chemical salts to soften the water. In addition, it is also necessary to remove the build up of limescale using acid or scraping away deposits. Water softening in this way can also lead to corrosion. A company in Norwich has installed a unique system, which has improved production efficiency.

Robinsons, a top manufacturer of soft drinks since Victorian times, has installed a Hydroflow water conditioning system to help prevent the build up of limescale on heat exchangers on its Fruit Spring pasteurising line.

Hydroflow believes this is the first installation that has been used to protect a water and product system. It works by emitting randomly varying electric fields throughout the system, preventing the build up of all limescale deposits, including calcium carbonate. The company says that no other physical water treatment system operates in the same way as Hydroflow, which protects standing water and is not dependent on water flowing past the unit. It can treat the water both upstream and downstream and is easily fitted to existing and new systems. An added bonus is the low power consumption and subsequent low operating costs.

Before installing the units, the Robinsons team had to stop production lines and descale the heat exchange plates every two to three weeks, to strip down equipment and scrape off the limescale with chemicals. This would often mean losing a day's production. All that is required now is a routine inspection and clean every two months.

An added benefit for consumers is that the natural calcium and magnesium minerals are retained in the drink.

Limescale protection first at Robinsons Robinsons have their production facilities located at Norwich, which is an area of particularly hard water – a notorious production problem for drink and food manufacturers. The factory has installed the Hydroflow water conditioning system to prevent the build up of limescale on the heat exchangers of the pasteurising system for the Fruit Spring line. This is the first installation that the manufacturers, Hydropath Ltd believe has been used to protect a water and product system. Hydroflow is a patented system that prevents the build up of all limescale deposits, including calcium carbonate. Hydroflow works by emitting randomly varying electric fields throughout the system. Tel: 0115 986 9966

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Prior to the installation of the Hydroflow units, the Robinsons production team had to stop production lines and descale the heat exchange plates every two to three weeks. This involved stripping down equipment and physically scraping off the limescale build up with chemicals. This would take a full day and then involve a CIP (clean-in-place) and therefore amounted to a considerable production expense. It was also not possible for the maintenance teams to always schedule this 'service' at a convenient time such as weekends; occasionally the build-up would be so severe that the descale would have to be carried out mid-week and a day's production would be lost.

In an attempt to solve the production headache, Robinsons' Process Manager consulted Dr Fred Walker, water treatment consultant from Everett & Walker. He recommended the Hydroflow physical water treatment system.

Hydroflow prevents the build up of all

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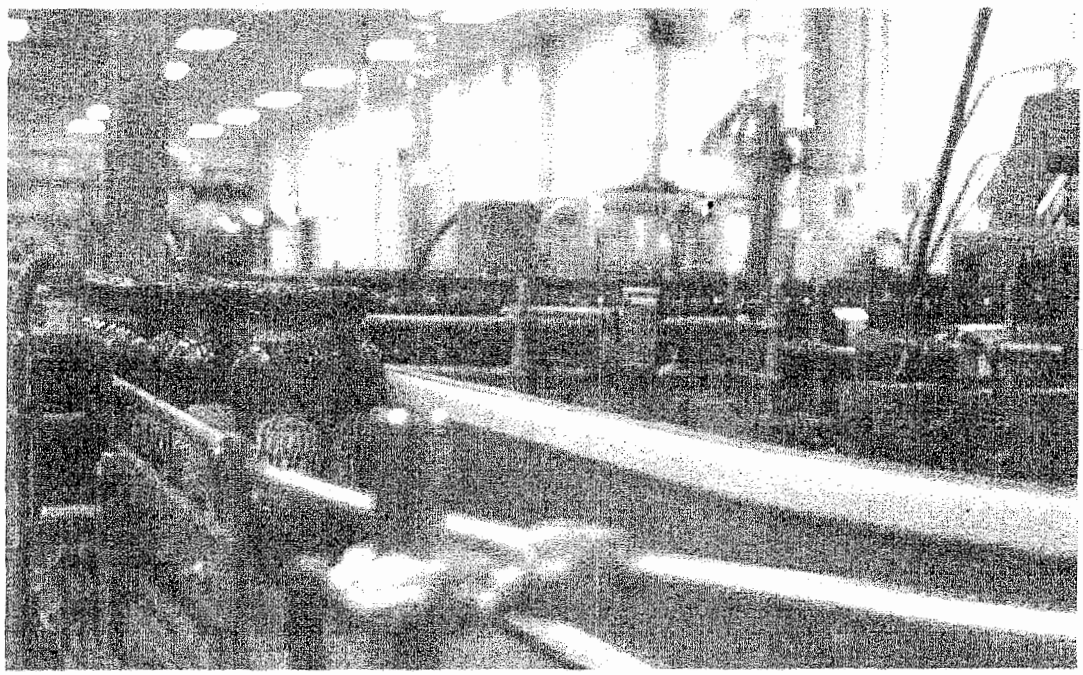

by emitting randomly varying electric fields throughout the system. This enhances the precipitation of the bicarbonates from solution to suspension by introducing clusters of ions in the water to act as seed for suspended crystallisation. The resulting suspension therefore does not adhere to pipework or internal surfaces, but is merely 'washed away' with the flow and during blow down.

Because of the consistency of the problem prior to installation of the unit, the team at Robinsons knew within a few weeks that it was having the desired effect. All that is now required is a routine inspection and clean every two months, without the need for an extensive descale. Any residue that has built up is of a white powdery consistency and easily brushed off. An added benefit for the consumers is that the calcium and magnesium minerals, which are naturally present in the water, are retained in the drink, offering nutritional benefits.

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