

WATERWIDE

THE INDUSTRIAL WATER TREATMENT SPECIALIST

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Going Digital

The technical ability of WATERWIDE in the field has been further advanced by the supply of Digital Cameras for our Technical Field Engineers. This will allow photographs to be taken and reproduced as part of the Technical Service Report presented. Our Technical Service Reports (TSR) already set the benchmark for our competitors to follow and our clients are already aware of the benefits of having the WATERWIDE reporting system in place. Not only do our TSR's detail current technical data taken during the site visit, but they also provide important historical trends on critical parameters by means of a set of graphs produced from the clients own database of results. This current advancement will now allow photographs to be taken, down loaded and presented to the client, only minutes after they have been taken, thus highlighting in graphic detail, the point of discussion in the main text of the Technical Service Report.

Being at the fore front of water treatment technology and service, means that we continually strive to provide our clients with better, clearer and more meaningful reports, set out in an easy to understand format with a concise, to the point reporting style.

It's said that a picture paints a thousand words and with the introduction of these new cameras for all our engineers, we are now able to produce **Technical Service Reports which include photographic detail.** With the photographs being digital it also means that the image can be kept on the clients own unique data base and reprinted or compared with later photographs taken of the same subject for comparison.

What other water treatment company is committed to putting this degree of Technical ability in the front line with their engineers?

Domestic Water Quality and HS(G) 70

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The Health and Safety Executives guidance Note HS(G) 70 on the “Control of Legionellosis including Legionnaires disease” covers not only cooling water systems, but also **hot and cold water services.**

At this time of year, when the ambient air temperature rises, hot and cold water services can be a potential breeding ground for Legionella and other harmful types of bacteria.

Are you aware for e.g. that there is a requirement to monitor and log water temperatures if the hot or cold water system is of a certain volume? Or that micro-organisms can survive in HOT water systems? In short, the HS(G) 70 guideline, which falls under the Health and Safety at Work Etc. Act 1974, puts the onus on companies to ensure that hot and cold water systems are kept in a microbiologically acceptable state.

To ascertain the likelihood of Legionella or other micro organisms being able to develop and be disseminated from a water system, requires a specific RISK ASSESSMENT to be carried out by a competent specialist. For more information of the Risk Assessment Services WATERWIDE supply, please ✓ the appropriate box on the back cover and return it with your address.

Bromination

Tablets, an alternative to chemicals

WATERWIDE supply a wide range of bromine tablet dispensers with capacities to cope with most flows.



Bromination is a very effective method of maintaining low microbiological levels in a water system and the use of a brominator means reduced operator input. As the brominator is fed with tablets and has no moving parts, there is little possibility for the unit to go wrong. Hence there are no mechanical parts to worry about. The unit will supply bromine to the water system on a continual basis so long as flow is achieved through the unit. Flow measurement is optional and for plant which require only intermittent bromination, a solenoid valve can be fitted to shot dose brominated water.

Technical Forum

Part 1 of 2

Oxidising Versus Non Oxidising Biocides

Halogen based microbiocide such as Chlorine and Bromine have long been used to control microbiological development in cooling water system applications. This quarter's Technical Forum takes a brief look at the advantages and disadvantages of using oxidising microbiocides. In September's Newsletter, we will look at the advantages and disadvantages of using non oxidising products.

Chlorine and bromine are termed 'oxidising' because of their ability to oxidise organic matter. As bacterial cells are made up primarily of organic matter, so they can be physically oxidised or broken down in the presence of an oxidising agent.

Because the oxidation process is non selective in the organic matter which it oxidises, bacterial resistance to the oxidising microbiocide cannot be built up. Thus, providing the bacterial cell comes into contact with a sufficient level of oxidising microbiocide for a sufficiently long time period to allow the oxidation (breakdown) of the bacterial cell structure, then the cell will be killed off. Some of the main advantages of this type of product over the non oxidising type of biocide is that it works very rapidly, it requires very low levels of free oxidising agent to be present to work very effectively, it is of low toxicity to humans at use concentration and it does not have the potential for build up of microbial resistance. All these factors make it a first rate microbiocide. So, why do we require non oxidising products?

The answer lies in the fact that along with the advantages of such products also goes some fairly significant disadvantages. The presence of chlorine or bromine in a cooling water can interfere with the overall water quality. Both chlorine and bromine are usually introduced into a water system by means of a carrier. In the case of chlorine this is often in the form of Sodium Hypochlorite, with bromine, as Bromohydrantoin. Both methods increase the base TDS of the cooling water and add potentially high levels of aggressive anions to the water. (chlorides, bromides etc.). These have corrosion implications. Additionally, both chlorine and bromine ions themselves are extremely corrosive when overdosed and can have very damaging effects on a corrosion inhibitors passivating properties. Indeed, some types of inhibitor are also broken down (oxidised) in the presence of halogens. Inhibitor selection, when used in conjunction with oxidising microbiocides is therefore of great importance.

Halogens are also volatile being blown out of the water as it passes over the tower pack. Thus they do not last for any length of time in the system. This is why so much attention is paid to 'contact times' when using these types of products.

When considering an oxidising microbiocide program therefore the advantages of non resistance, low toxicity and unequalled performance have to be weighed up against the disadvantages of increased corrosion potential, short retention times and need for 'more frequent' dosing to maintain biocide levels.

WATERWIDE

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