

Disinfection of water circuits...

... with minimum impact on the environment

■ Removing macro-organisms and micro-organisms

Cooling circuits, process water... often represent the ideal conditions for living organisms to develop. Macro-organisms, such as crustaceans, can cause blocking of pipes and increasing flow losses and energy consumption. Micro-organisms, like some bacteria, can lead to corrosion. The legionnaires' disease, caused by the Legionella bacterium, often is front page news. To prevent these organisms from developing, we add disinfectants to the water circuits. However, these agents are often toxic and the government is attempting to discourage their use by imposing taxes.

■ Avoid environmental damage and high taxation

There are however countless ways of restricting this burden on the environment while keeping the growth of living organisms in check. For example, good timing can make the treatment much more effective and so reduce the quantities of toxic substances required. There are also new, more efficient products, which are less harmful to people and the environment. There even exist perfectly efficient techniques that use no disinfectants at all. The question is, which of these techniques gives the best value for money for your particular installation?

■ Place the decision in experienced hands

Are you interested in developing saving measures and environmentally friendly solutions such as these? Yes... but only with the certainty of good results? Then allow experienced experts to find the answers to your questions. People like the water experts at Laborelec, who can offer practical help and advice.

Optimal methods of disinfection

■ Intervention at the right time

Our specialists use monitors to understand the biological cycles in your water circuit. This knowledge enables us to strike when the organisms are at their most vulnerable.

■ Less dangerous products, more efficient use

Classic disinfectants such as chlorine compounds, ozone, peroxide, bromine, peracetic acid, etc. are mostly toxic. Some of them even form carcinogenic by-products. Our experts develop safer alternatives for the environment, which also disinfect the water more efficiently.



The technical Competence Center
in energy processes and energy use.
From innovation to operational assistance.



We will think along with you to find the best technical, economic and ecological method of disinfecting your water circuits.

■ Physical measures

The following techniques involve no disinfectants whatsoever:

■ Thermal shock

A sudden and moderate (5 to 10 °C) increase in water temperature. This is particularly effective against molluscs like mussels, and should be applied at the end of the fixation period, generally in October. These macro-organisms are indeed very sensitive to temperature rise.

■ Filtration

By using very fine filters (0.45 µm) we can even filter out micro-organisms. This technique can be applied to circuits with a maximum flow of 500 m³/h.

■ Special paint on the walls

“Anti-fouling paint” changes the viscosity of the water contacting the walls, and so prevents the organisms from attaching themselves. This paint can be used on concrete pipes, circulation pump reservoirs, ...

■ Adapted operating conditions

Sometimes it is possible to increase the flow of the water to speeds in excess of 1 m/s. Living organisms find it much more difficult to develop under these conditions.

■ A handy summary of the possibilities

Our experts have compiled a reference work of prescriptions and recommendations for managing all your water circuits. Depending on the identified developments, they offer you the most suitable control.



Five reasons for you to choose Laborelec:

- you have one-stop shopping for your energy needs;
- you get access to more than 40 years of experience;
- you get rapid service with reliable solutions;
- you increase the profitability of your installations;
- you benefit from independent and confidential advice.

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