



– Perfectly clean water
without the use of chemicals

Showers in indoor swimming pool was legionella-free without dangerous chemicals.

In the spring of 2012 dangerous legionella bacteria outbreak was found in the shower installation in Osby swimming hall in Sweden. Now the shower installation is completely legionella free, and secure the visitors against future outbreaks, by using a harmless and biodegradable liquid NEUTHOX[®].

Each year, between 100 -150 Swedes has been infected with dangerous legionella bacteria, partly driven in water systems in apartment buildings, public institutions, such as shower installations in swimming pools, sports halls, hospitals and Nursing homes. Statistically 15 out of 100 infected people die of Legionnaires' disease.

Now the many happy water guests in Osby swimming pool can feel it completely safe to use for the audience. As one of the first swimming hall in Sweden the shower installations has got installed a generator using common salt, water and a small amount of electricity produces the liquid NEUTHOX[®], with effectively prevents and eradicates the bacteria throughout the water supply and ensure itself of adding the right dosing amount of NEUTHOX[®].



DCW
Danish Clean Water



Drawing of a typical bacterial

Property engineer in Osby Municipality, Ulf Nilsson was helped to choose the new solution to the shower installation in the Swimming pool.

"I got the solution recommended by Secon, Swedish Energy Consult, who have been our partners for 30 years. I thought immediately that it seemed like a great solution because it is safe to handle contrary, for example, to disinfect with chlorine dioxide, which can produce hazardous gases," says Ulf Nilsson.

Until recently, the shower system did not have a routine for Legionella control. Previously they rinsed the shower system at night by flushing 70 degrees hot water through the pipes, which would kill the bacteria but the hot water did not remove the biofilm in the pipes where bacteria grows, therefore this method is not safe. In spring 2012, a control measurement showed legionella bacteria count in the 800 cfu/100ml. A measurement, which resulted in the installation of a new disinfection system.

"The alternative would be that we should completely separate the hot and cold water piping throughout the building, and it would require a major expensive renovation. We wanted to avoid this solution. NEUTHOX is more efficient and a much easier option, than daily to flush the pipes with hot water. The DCW solution took 6-7 men's work a whole night "says Ulf Nilsson.

Fortunately, no one fell ill because of the Legionella outbreak in Osby. Today is the bacteria count in the pipe installation / systems below limited legislations values.





Technologisk Institut about NEUTHOX®

A new report from Teknologisk Institute in Denmark undergoes all existing solutions for legionella preventions.

About NEUTHOX® states in part:

"Technology's ability to destroy biofilms and eliminate Legionella problems has been demonstrated in laboratory testing at recognized universities and demonstrated in practical installations in buildings such as office buildings, hospitals and nursing homes. There are no health or safety negative aspects associated with the installation and construction. "

Facts about NEUTHOX®

NEUTHOX® is a clear one hundred percent biodegradable liquid to kill potentially hazardous bacteria in water, such as legionella and Salmonella. Over a period deplete NEUTHOX® also the existing biofilm in piping, with is the housing for new bacteria. When NEUTHOX® is added new piping systems, it will prevent biofilm from ever occurring.

The Danish company Danish Clean Water is the manufacturer of the generator, which produces NEUTHOX® through an electrolysis process- uses common salt, water and electric power to produce NEUTHOX®.

The liquid is added to the water via a programmable controller, which ensure that the dosage is adjusted to the current bacteria content in the water.



"It has long been widely believed that hard chemistry was the only effective weapon against legionella. With our generator, you can certainly prevent and combat legionella - without risk to either people or environment"

*Hardy Jepsen
Director of Danish Clean Water*

Legionella

Legionella is a bacterium that lives in surface water, rivers, lakes, wastewater and drinking water. The bacterium can cause Legionnaires disease – a severe form of pneumonia each year is estimated to affect 100- 150 Swedes a year. Approximately 15% of those infected die from the disease.

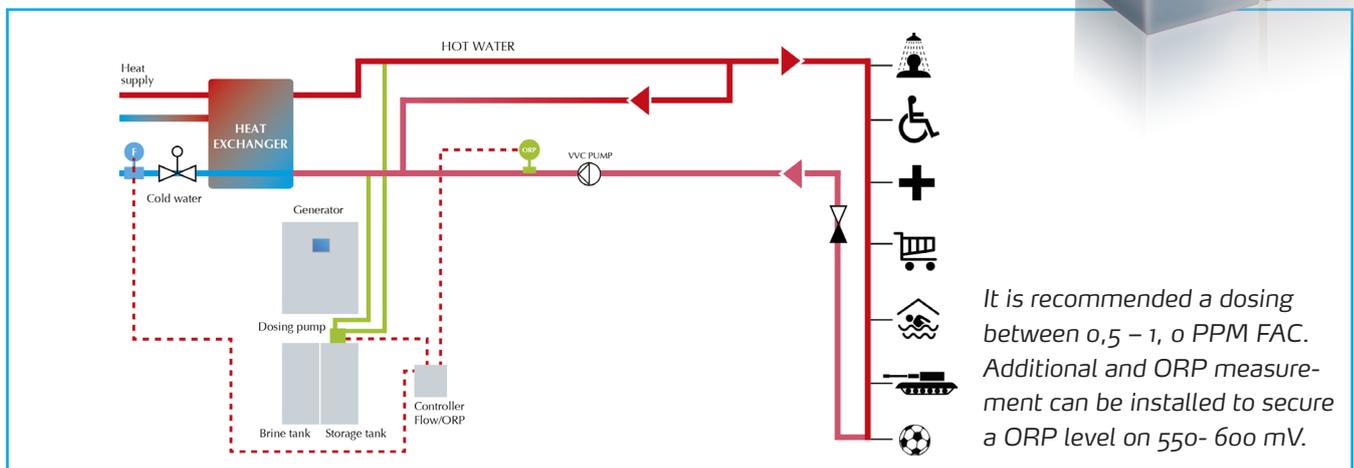
The bacteria spread by tiny water particles in the air. This may be when turn on the shower or flush the toilet. When you then breathe, you risk inhaling the bacteria into the lungs.

Legionella bacteria grow best in warm water that is allowed to stand for long. The problem is therefore seen often, for examples, shower installations, hospitals, shopping centers and apartment buildings.

At water temperatures above 58 degrees, doo the bacteria, but do not remove the biofilm. The Danish company Danish Clean Water, has developed and manufactures the Generator, and

market through a broad partner network. The Osby Swimming hall is one of the first institutions that have invested in the generator with primary objective is to prevent and combat legionella. There already exist a lot of many applications for using the generator for example cleaning of wastewater.

With common salt, water and electric power, our disinfectant generator generates the efficient liquid Neuthox through an electrolyse process. The liquid kills potentially dangerous bacteria such as legionella and salmonella.



It is recommended a dosing between 0,5 – 1, 0 PPM FAC. Additional and ORP measurement can be installed to secure a ORP level on 550- 600 mV.