

European Strategy for Chlorine Reduction

There are credible researchers telling us that chlorine has some very serious health consequences when used as a sanitizer in swimming pools.

The obvious question is why hasn't the swimming pool industry adopted alternative technologies on a much more industry-wide basis? After all, chemical-free technology like ionization and ozone for swimming pools has been in regular use for over 50 years in places like Germany, France and other European nations.

Let's examine some of these issues. For drinking water or swimming pools, the European strategy is to use Ionization or Ozone to reduce the organic load in water. When chlorine is required for long-term disinfection (when used in conjunction with Ozone) (such as distributing water through a municipal water distribution system), they use a very small amount of chlorine, thus reducing the risk for people drinking the water.

It is the organics that cause problems when combined with chlorine. By reducing the organic load, the Europeans keep the chloramines (the cancer causing substances) at a very low level.

In European swimming pool systems, the same thought process prevails. In German DIN standards, for example, the strategy is to use a large "surge pool" that the public doesn't even see to apply disinfection chemicals. The disinfection byproducts are then removed by various filtration processes prior to the water being returned to the pool with a slight dose of chlorine. Under these standards, swimming pool water is essentially treated to drinking water standards.

The North American model developed under much different circumstances than the European.

In North America, chemicals were adopted wholeheartedly around the turn of the century as the answer to the larger, more expensive European models of water treatment. Engineers here found they could build water treatment plants and swimming pools at greatly reduced capital costs if they used what was then considered miraculous chemicals to treat water.

And, for the most part, the systems did what they were designed to do and that was to kill micro-organisms that could lead to sickness and death. What they didn't anticipate was that chemicals like chlorine would have very serious byproducts that become health hazards themselves.

However, in North America we are now stuck with swimming pools that in Europe would be considered "surge tanks". The problem is to evolve an Ionization or other technology that can retrofit a large installed base of swimming pools in an economical manner. These systems are now starting to appear in the marketplace in increasing numbers.

If you consider that there have been several generations of engineers who have been taught chemical processes as a matter of course, it is not easy to persuade them that switching to this "new" (to North America) technology is the way to go.

Some of the major pool operators in North America including Disney's water parks use non-chlorine technology. The United States Navy has switched to non-chlorine systems for their Dolphin programs. As these technology leaders continue to push for alternatives to Chlorine, acceptance of the technology will be more favorable.

Many consumers are requesting Ionization systems for their backyard swimming pools. Regulations for these pools do not require them to use Chlorine or other chemicals and many owners are now opting for Ionization systems.

Once pool owners switch, they realize that they no longer have to put up with red eye, rashes and the health consequences of chlorinated pools.

As the technology becomes more prevalent, expect to see more expertise at the local pool builder or pool maintenance companies. However, many of these companies rely on repeat sales of chemicals. These companies are likely to be highly resistant to Ionization systems as after-sales revenues will drop. However, for pool maintenance companies that are being paid

to keep pool cleans, Ionization is a good thing. They should spend less time maintaining pools and the pools will be cleaner and the water more appealing.