

Smart water disinfection for community safety



When it comes to public swimming pool water disinfection, Australian Innovative Systems warns that it's better to be safe than sorry.

Australian Innovative Systems' (AIS) award-winning water disinfection technology is highly respected worldwide. The Australian-owned and -operated manufacturer of commercial and residential chlorine generators has its technology operating in home swimming pools, swim schools, aquatic centres, resorts, hotels, FINA-standard competition swimming pools and large-scale water parks.

While global health guidelines recognise that chlorine remains the most effective swimming pool water disinfectant, AIS CEO Elena Gosse warns of potential 'ticking time bombs', where public swimming facilities are still using outdated and unsafe conventional chlorine dosing – whether in liquid, granular or gaseous form.

'Although it may be unintentional, it astounds me that some councils are knowingly putting public safety at risk with their continued practice of storing, handling and dosing chlorine,' Gosse says.

'Apart from the obvious risk of chemical accidents and incidents impacting staff and patrons, having large quantities of chemicals on site – particularly hazardous materials such as

chlorine gas – may even be a potential national security concern. The large-scale transportation and storage of chemicals within our communities is also alarming.

'Thankfully, there is a simpler, safer and smarter alternative. A number of progressive councils have already adopted inline chlorine generation via electrolysis for their water disinfection needs. This method negates the need for storage or handling chlorine on site.'

The main difference between conventional chlorine dosing and electrolysis is how the chlorine is produced, stored and introduced to the pool water.

Gosse explains that inline chlorine generation produces chlorine on site and



inline via electrolysis. Pool water passes through an electrolytic cell, converting minerals and salts to sodium hypochlorite (commonly known as liquid chlorine). The chlorine is then distributed directly into the water, keeping it clear and bacteria-free.

‘The method of electrolysis is not new – it is more than 180 years old,’ Gosse explains.

‘AIS has pushed the boundaries of electrolysis and has enabled pool water disinfection with super low total dissolved solids (TDS) levels of 1200 parts per million.

‘Our water disinfection technology is successfully operating in a number of major municipal facilities, such as Maitland Aquatic Centre in New South Wales; Scarborough Beach Pool in Western Australia; and many Queensland pools, including The Valley Pool Brisbane, Settlement Cove Lagoon, the Cairns Esplanade Lagoon, Gold Coast Aquatic Centre and Centenary Aquatic Centre, alongside numerous school swimming pools.

‘AIS technology was even treating water at the Malaysia National Aquatic Centre during the 2017 Southeast Asian Games in Kuala Lumpur.’

Suitable for fresh, mineral or saltwater swimming pools (with salinity levels from 950 parts per million to 35,000 parts per million), AIS technology disinfects water on site and inline, conveniently and automatically.

Elena has received positive feedback from many of the facilities, not just about how clear and clean the water is, but also about other significant benefits, including:

- health and safety improvements
- increased staff and community wellbeing due to significantly improved water and air quality
- decreased public safety risks associated with chemical transportation, storage and handling
- decreased risk of accidents and incidents, including chlorine offgassing, exposure, inhalation, splashes, burns and potential chemical attacks
- reduced need for personal protective equipment and hazardous material training
- reduced maintenance costs
- more stable water chemistry, which improves filter and heater efficiency
- reduced corrosion of pool equipment and surrounds
- easy access to spare parts and advice, thanks to AIS’s Australian design and manufacture
- better water chemistry
- better control over water balance, as no additives are introduced into the water, keeping TDS and water hardness levels stable
- elimination of cloudy water and water scale
- water savings
- stable TDS and water hardness levels, which eliminate the need to dump pool water to balance water chemistry.

As an industry influencer, AIS is passionate about education and exposing the risks of conventional chlorine dosing, while promoting the benefits of inline chlorine generation via electrolysis.

‘When it comes to public safety, I think we all agree that it’s much better to be safe than sorry,’ concludes Gosse. ■