



Case Study: AOT Wallenius for water system construction



The project

In 2013, non-chemical water treatment Advance Oxygenation Technology (AOT) Wallenius, was trialled as an alternative to traditional chemically dosed fill and test water on the incoming mains of four large closed water systems at a construction project in the Midlands.

Filling and pressure testing closed systems with treated water is widely adopted during construction. The process involves proportional dosing of a biocide into the fill and test water at source, which has several drawbacks, including untrained and unprotected operatives coming into contact with diluted biocides. Alternatively, initial pipework testing is often completed using air, which also comes with health and safety risks.

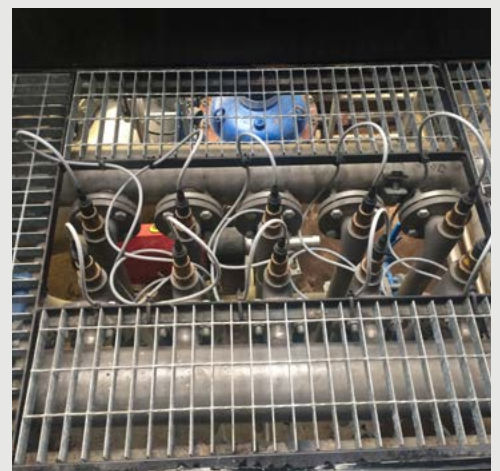
The efficacy of the process is also compromised as only low levels of biocide can be dosed and biocides do not kill bacteria instantly, leading to further dilution where parts of a system are opened to sections previously tested.



The solution

By using AOT Wallenius non-chemical water treatment instead of chemical dosing, bacteria is instantly killed, eliminating the need for air-testing and reducing health and safety risks, improving sustainability by reducing chemical usage.

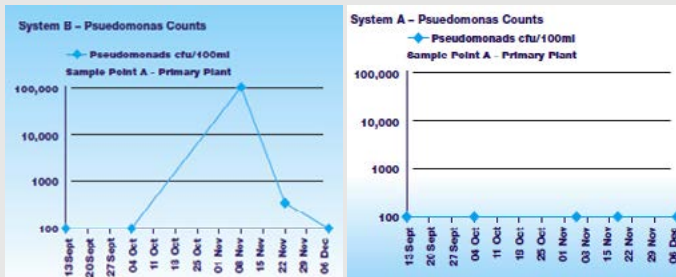
To install AOT Wallenius, the mains water supply was initially disinfected using chlorine dioxide at fill points, temporary flushing connections and hoses to eliminate an existing biofilms immediately downstream of the 110 v AOT unit. All fill and test water, plus subsequent flushing water was then pre-treated before introduction into the systems.





The outcome

Following installation, the system was tested throughout the water treatment process and post completion, with UKAS accredited laboratory analysis providing excellent results which showed bacterial levels to be virtually non-existent. The use of AOT Wallenius on the incoming mains supply provided a safe, environmentally and cost effective alternative to traditional chemical dosing.



AOT installed throughout

AOT removed early October

NB: AOT does not replace any of the closed system cleaning processes as it will not eliminate bacteria and biofilm already present in closed system. Biocide washing is still highly recommended and final biocide dosing on completion is essential. AOT Wallenius is designed to produce the best possible conditions for a successful cleaning programme.

- Virtually non-existent bacteria levels
- Cost effective
- Low environmental impact
- Improved Health & Safety

Guardian Water Treatment Ltd

Head Office
Units 9 & 10
The Capricorn Centre
Cranes Farm Road
Basildon
Essex
SS14 3JJ

Tel: 01268 287477
Fax: 01268 287156
Email: info@gwtltd.com
Web: www.gwtltd.com

Healthy, compliant air and water for construction, commissioning and maintenance

