



Advanced Hydro Ltd

Titanium AOP – Case Study NHS Mains Water Treatment

The Titanium AOP water disinfection system has gained a first rate reputation in many water treatment applications. Used extensively in building services, cooling tower disinfection, drinking water treatment and other specialist areas the AOP has proved significantly more efficient than any other physical and chemical treatment systems. Due to its great success at bacterial control the NHS agreed to trial the AOP system on the mains water supply to a Community Hospital.

The AOP replaced a chlorine dioxide unit which had proved unreliable and difficult to rectify. A WRAS approved AOP 5 was installed and a case study undertaken to assess its performance.

Not only does the AOP offer environmental benefits over chemical systems it provides better bacterial control and is more cost effective. Proven extensively in the field the system has also been scientifically tested at the Vitens Laboratories in the Netherlands. Here the AOP showed a Log reduction in excess of 6 for Legionella. As a novel treatment method the AOP has been employed on the toughest and most challenging applications where other methods have failed. The AOP typically produces an improvement in bacterial count of over 99%.

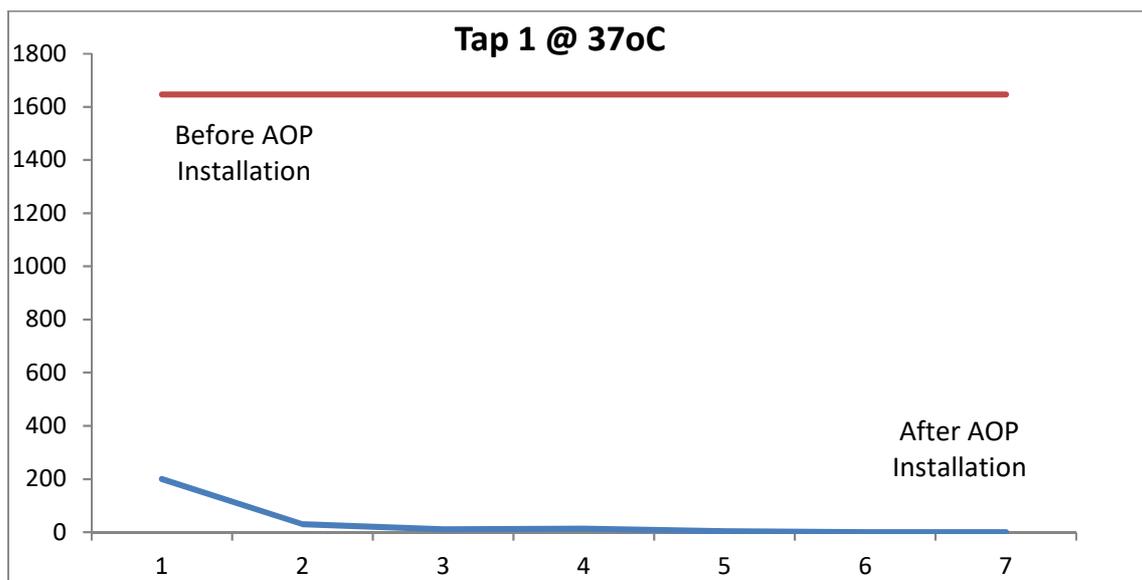


A number of samples were taken over the test period from two outlet taps within the hospital. These were then analysed for Coliform, E. Coli and Colony Counts @ 22 and 37°C respectively.

The results show a clear and significant improvement in the bacteria count within the hospital water system. Of the two sample points tested at 22 and 37°C the percentage decrease in colony count was **99.8%**, **100%**, **99.7%** and **100%**. The mean reduction for bacterial count at 22 and 37°C was **99.8%** and **100%** respectively.



The installation of the AOP unit at the Community Hospital reduced the bacterial count by an average of **99.9%**. The AOP kills all microorganisms and so has been able to deliver clean water into the potable water system and reduce bacteria within the hospital. The AOP kills the bacteria that make up biofilm and also oxidises the nutrients that biofilm feed on. Hence the AOP is able to provide cleaner water and reduce the effects of biofilm.



Graph showing reduction in Bacterial Count at one sample pointed tested at 37°C

The Titanium AOP system offered the hospital a far better water treatment solution while at the same time giving a safer, chemical free and a more environmentally friendly system. By installing the AOP the hospital also expects to make considerable savings in the overall running costs compared with that of chemical alternatives.

For a full copy of this test report, other case studies or further information on the Titanium AOP system please contact:

