

PRESS INFORMATION

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Remote water monitoring success in Australia

With a lifetime of experience in the water industry, Glyn Church from WestWater Enterprises in Australia has witnessed any number of new technologies, each of which has had a varying degree of impact on the sector. However, Glyn says, “The distribution network monitoring sondes from Intellitect Water (UK) represent the most exciting development that I have seen in drinking water for almost 30 years.”



The Intellitect sondes monitor the quality and flow of water in pipeline distribution networks. Inserted directly into water pipes the ‘Intellisondes™’ measure a range of important parameters including Chlorine, and transmit the data back to the water company, providing (for the first time ever) cost-effective, reliable, accurate, real-time information on water quality at the point of delivery.

Glyn Church is in an ideal position to assess the value of the Intellitect technology. His career in water treatment began in the UK prior to privatisation and has continued in Australia for the past ten years. WestWater Enterprises was founded by a group of individuals, each with decades of experience in water treatment. The company has grown considerably since its inception, and now operates from Perth and Queensland with customers spread all over the Asia Pacific region.

Specialising in water treatment and control, the company is able to provide engineered solutions and packaged turn-key systems to meet specific needs. As a result, Glyn and his colleagues possess an intimate understanding of the water sector's needs.

Commenting on the situation in Australia, Glyn says, "Remote data acquisition and control is a vitally important feature of the water industry in a country the size of Australia – some of our regional water companies service territories the size of several European countries which means that it is impractical and very expensive for staff to visit some of the more remote locations."

"Our customers have been looking for a solution to their need to monitor tap drinking water without incurring huge operational costs and the Intellitect products appear to meet that need."

Initial Trials

In cooperation with a local water company, WestWater Enterprises has operated two Intellisondes for a trial period of one year. One unit was installed at a reservoir outlet on a 1350mm pipe and a further unit was installed on a gravity fed tank.



The lengthy trial period was necessary because, as Glyn explains, "it was necessary to test the devices across a broad range of temperatures; during the summer months temperatures regularly exceed 40 Deg C whilst in the winter, temperatures near Perth can drop to freezing at night time."

During the period of the trial, Glyn reports that the Intellisondes performed extremely well, as a result of which it is anticipated that a significant number of units will be deployed in the near future.

Further trials have been initiated in other regions of Australia. For example, a unit is being installed to monitor water re-use at a wastewater treatment plant and Glyn was pleased to note that an Intellisonde was recently installed just north of Sydney by water company engineers without any prior training.

Technical issues

Whilst there has been a long-standing desire to monitor drinking water quality within the distribution network, Glyn says there have been two fundamentally important issues that have been addressed by the Intellitect development team. Firstly, and most importantly, the devices have incorporated solid-state chlorine sensors that have been able to provide



accurate data without the need for frequent recalibration or chemicals. Secondly, following early discussions with WestWater Enterprises, Intellitect has built a Modbus interface into the Intellisondes™ which provides speed and simplicity in the connection of the sondes with conventional SCADA systems.

David Vincent, the inventor and Intellitect's Engineering Director, believes that the company's Chlorine monitoring technology is a core competence, adding, "Chlorine is obviously a vitally important parameter for drinking water; our solid-state sensor is highly accurate ($\pm 10\%$... significantly superior to DPD) across a broad range from 0.5 mg/l to 5 mg/l."

Measurement options include Free Chlorine, Total Chlorine, Mono-chloramine, Dissolved Oxygen, Conductivity, pH, ORP/Redox, Flow, Pressure, Temperature,

Turbidity and Colour. Importantly, none of these requires membranes or reagents and the sondes can be deployed for long periods.

Looking Forward

Following the success of the early trials, Glyn Church is obviously excited about the future prospects for the technology: "We believe that a huge potential market exists for the Intellisondes™ - deployed at strategic locations throughout the network, continuous monitoring will enable efficient management of water treatment processes including disinfection. It will also inform decision making in the rehabilitation process and other operational activities such as flushing and air scouring.

"Importantly, the ability to monitor remotely will mean that time and money are not wasted by having to make regular visits to multiple points over a distribution network.

"The excitement that surrounds the Intellisondes™ is a result of the fact that it is very rare for any product to offer major cost savings whilst improving both process efficiency and delivered water quality."

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Notes to editors:

- Originally formed in 2005 and operating from two sites in the UK, Intellitect Water Limited develops highly innovative water monitoring instrumentation. The business is venture capital backed with the principal shareholders being Credit Suisse, Pemberstone Group, Catapult Venture Managers and management, including former Chief Executives of both Anglian Water and South West Water. The company has combined many years of experience in the water sector with a deep understanding of monitoring technology to create unique products for the measurement of chlorine and other key water quality parameters within drinking water distribution networks.

Key features of the technology include:

- Solid state membrane-free sensor technology
- Tiny 'plug-and-play' sensors
- No requirement for chemical reagents
- Robust and highly accurate
- Built in data logger
- GPRS capability
- Easy to use, with no special software

The major benefit of Intellitect's products is that they provide water companies with access to water quality data after it leaves the treatment plant and before it reaches the consumer.

- **Contact details:**

www.intellitect-water.co.uk