

PRESS INFORMATION

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China trial for new in-pipe monitor

New technology, developed by Intellitect Water (UK), that provides visibility of water quality within the drinking water distribution network, is currently on trial in China.



Shanghai based, Ewaters Environmental Science & Technology Co., Ltd, which specialises in water network modelling and data management, carried out the trial and their Managing Director, Weijun Zhang says, "We are keen to promote this ground-breaking technology in China because we see the importance of capturing concurrent multi-parameter data and believe that the water industry in our country will derive enormous benefits from its deployment."

The monitors (Intellisondes™) provide real-time monitoring data from up to 12 sensors (including a robust, highly accurate solid-state chlorine sensor) inside a tiny sonde head that fits in the pipeline through a 1½ inch valve.

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 require membranes or reagents and the sondes can be deployed for long periods without the need for frequent recalibration or maintenance.

The probes can be fitted into large pressurised pipes (via a 3.8 or 5cm valve) as well as pipes only five centimetres in diameter, for street level monitoring.

Emphasising the importance of the trial, Weijun Zhang says, "The management of water quality in distribution systems has always been a complicated task because it has been difficult to install water quality monitoring instruments and there is a lack of effective ways to capture real time data. As a result, it has been hard for water utilities to capture sufficient data to create a full picture of system performance under varying conditions, for management purposes. For example, utilities need to be able to study the impact of water quality in the trunk mains from hydraulic controls, pipe materials, age etc."

"This situation has also created difficulties for distribution system modelling. With insufficient data, model calibration and system performance is limited within the accuracy of the available data and often model prediction of water quality may only be indicative which may affect the quality of management decisions."

"Although the test in China was only at a single site, the data retrieved has clearly demonstrated both the sensitivity of the sensors, and the status of the water quality. The data provided a clear picture of water health including trends for each parameter and diurnal variation. For computer modellers the availability of such water quality data is a dream come true."

"From an operational perspective, the installation and maintenance of Intellisondes is simple. Also, the generation of real-time data makes it possible to link to a Web based data service and further integrated with a real time modelling system to assist in the evaluation of various operational scenarios."

Looking forward, Weijun Zhang says, "If the trials are successful, we believe that large numbers of low cost monitors will be installed in China's drinking water distribution

networks. This will enable the optimisation of Chlorine dosing to reduce costs and protect water quality, customer taste and perception."

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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