

# The Watermark

The Newsletter From

**Automated Water & Effluent Ltd**

Summer 2010

## WHATEVER THE WEATHER

While with a customer last year helping them with complying to the local water authorities requirements re their consent to discharge I was asked if we could supply a weather station comprising of wind speed, wind direction and ambient temperature which required to be displayed and recorded.

I figured this was no different to measuring their pH, Flow & temperature and data logging the results only it would require wind speed and direction transducer so the answer was yes.

After taking in excess of a year to get capital approval the project went ahead. The wind speed Anemometers was a common body unit and 3-cup rotor design producing a very accurate linear voltage output, which was converted to an industry standard 4 - 20 mA signal.

The wind direction had a precision resistance output so we had a special unit manufactured to suit the wind direction transducer and calibrated one



of our new BC7635 slave controllers to display the results in degrees of rotation from north IE North is 0o East is 90o South is 180o some clever electronics allowed the unit to ignore buffeting of the wind. The recorder and indicator were built into a GRP control panel for quick and easy site installation. When the panel had been

installed Chris and Bill our engineers commissioned the system including setting the Anemometer and Wind vane mounted 40' up by the use of the sites cherry picker.

The site staff using the optional networking facility of the paperless recorder - data logger, is now downloading the results.

## BC7635 & BC7335 New Slave Controllers

Our new slave controller the BC7635 that is a 96 x 96 mm panel mounting instrument and BC7335, which is the 96 x 48 mm version, are proving very useful.

The new controllers feature 2 control relays which maybe user configured for Hi -Lo, Hi - Hi or Lo - Lo operation with delay timers, one alarm relay a digital input an isolated output and a built in loop power supply for use with

transducer requiring a loop power supply.

The ability to easily scale the display in engineering units make life so much simpler when commissioning a system and allows the controllers to be used with a wide selection of transmitters, which proved very useful when used with the weather station as the BC7635 was scaled in degrees rotation .



BC7335 in 96 x 48 Din housing



BC7635 in 96 x 96 Din housing

# Technical Tips

## Double Confinement for Chemical Dosing.

Automated Water and Effluent Limited has a double confinement system to increase the safety of our dosing system which are used in many applications including pH adjustment of wastewater treatment, process solution strength control, evaporative cooling tower water dosing, chlorination of potable and process waters, swimming pool water treatment.

Many of our customers use our pH and Redox controllers to control the addition of chemical reagent in their process usually by dosing pumps used to dose small accurate volumes of reagent often concentrated acid and alkalis.

To protect personnel in the event of a chemical leak our red dosing pumps either electronic or motor driven are now available in custom made polypropylene housings.

For dosing from chemical carboys a simple stand with a bunded area to hold the chemical drums and an enclosure for the pump with a clear corrosion resistant front is used. The chemical dosing line which is run inside a second pipe of braided PVC to provide mechanical protection with the injection fitting located inside a housing ready for installation at the dosing point.

This system is ideal for use with either pumps for mounting on a flat vertical surface or pumps for foot mounting on a flat horizontal surface. For flat horizontal mounting a mounting shelf is included in the housing.

Each pump has an isolating valve allowing maintenance without taking the whole system out of service.

We offer red electronic dosing pump for either vertical surface mounting with fixed stroke lengths or foot mounting red electronic dosing pumps usually with manually adjustable stroke lengths.

Electronic pumps are ideal for pH correction when ordered with the optional external pacing input allowing proportional control from our P7685 pH controller.

These features offer substantial benefits when used on pH neutralising system dosing both acid and alkali in preventing over dosing and hunting from the acid reagent to the alkali, which saves wasting reagents being used to treat each other.

Automated Water and Effluent offer a wide range pH and Redox instrumentation, electrodes, dosing pumps, mixers and dosing tanks.



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As instrument engineers we are not fans of litmus paper or for that matter economy pH sticks, believing them to be OK as giveaways.

We have however changed our minds with the WD-36537 a waterproof portable pH tester as this is an excellent quality product being all "O" ring sealed including the battery compartment and you can even change the electrode so its not the usual throw away.

The Part No. WD-36537 waterproof portable pH tester features push

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button calibration with auto pH buffer recognition measuring range 0-14.0pH. The benefits of our stick pH meter are ease of use, economic to purchase and most of the entire unit is completely waterproof it even floats.

The top of the pH tester even has somewhere to tie a cord so it can be retrieve if dropped into your tank or sump.

So no more portable pH meter or electrode at the bottom of your effluent pit, delivery usually exstock and I suspect the cost of long term ownership is less than using pH papers.

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# Automated Water & Effluent Ltd

AWE House Antom Court, Tollgate Drive, Beaconside, Stafford, ST16 3AF UK.

Tel: 01785 254597 Fax: 01785 257724

[www.awe-ltd.co.uk](http://www.awe-ltd.co.uk) email [sales@awe-ltd.co.uk](mailto:sales@awe-ltd.co.uk)

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