The Watermark

The Newsletter From Automated Water & Effluent Ltd Spring 2011

NEW HIGH PERFORMANCE ELECTRODES

As our regular customers will know we supply a wide range of high quality pH, Redox electrodes, many are custom made for Automated Water & Effluent Limited.

New to our range for 2011 are the high performance sealed pH and Redox electrode series 8000.

These electrodes feature bodies moulded in Kynar (PVDF) which is a material with excellent chemical resistance able to withstand elevated temperatures.

The electrodes, have a 3/4" male thread at both ends, enabling either insertion into a pipe or immersion into an open vessel when supplied with a riser tube.

The P8000 pH electrode and R8000 Redox/ORP electrodes have *Tuff Tip* domed bulbs or platinum disc and Magnaflow annular ceramic junction located on the end of the electrode, with a double junction reference inside the body of the electrode.

The benefits are that the low profile dome bulb or platinum disc and reference are considerably more robust than full bulb electrodes, when installed in a pipe the flow through the pipe has a self cleaning action on the electrode and the close proximately of the bulb and reference provides a fast response.

With so many years in the business we know no one electrode is the answer to all pH measurement problems so our new P8000 can be supplied with a porous Teflon (PTFE) reference junction for those difficult applications.

As many new pH controller and transmitter feature a temperature display, our P8000 series pH electrode are available to order with a built in Pt100 to suit our P7685, P7635 series of controller and the P3630 two wire pH transmitter. Other values can be supplied to a special order.

We Are Exhibiting Again this time at :-

The IWEX Exhibition 24th, 25th & 26th of May 2011

At The National Exibition Centre (NEC) Birmingham.

We are pleased to announce Automated Water & Effluent Limited will be exhibiting at the IWEX exhibition at the NEC on Tuesday, Wednesday and Thursday 24th 25 th and 26 of May 2011

If you need tickets please contact Mrs. Vera Young by telephone 01785 254597.
or e-mail vyoung@awe-ltd.co.uk.

New on the stand will be peristaltic pumps for drain dosing and other applications where a simple system is required.

Motor driven dosing pump with a wide range of wetted parts including stainless steel, PVDF, PVC and Polypropylene to cover most dosing applications.

We will also be showing our 7600 range of instruments for pH, Redox, conductivity, dissolved Oxygen and residual Chorine along with the BC7635/7335 slave controllers.

To compliment our instruments we will also be showing items from our wide range of pH and Redox sensors for submersion into open tanks, and immersion into vessels and pipes, off line flow cells and auto clean electrodes, conductivity cells, dissolved oxygen electrodes and turbidity sensors.

There will be a selection of our red dosing pumps (RDP) with accessories to make a complete package including dosing quills, pressure relief valves, suction lances and flow sensors.

We are able to build simple dosing and control systems and back up our products with on site commissioning and routine service contracts.

Technical Tips

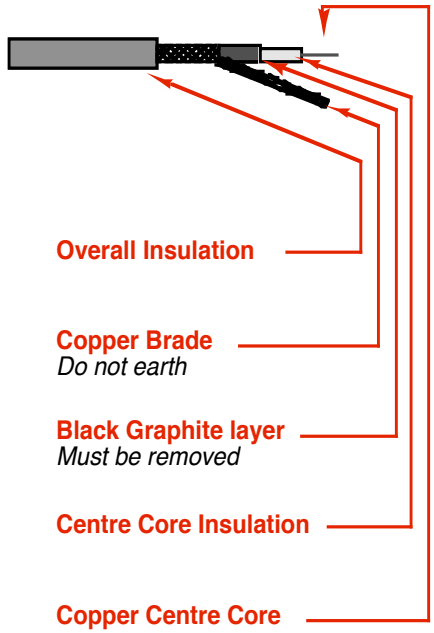
pH Connectors

If you thought a pH signal cable was just any old coax cable you were wrong due to the very high input impedance of a pH meter, input usually is in excess of 1000mΩ.

The quality and insulation property of a pH connecting cable is critical. The cable must have a black graphite based shield round the insulation on the central conductor and a good quality copper braided screen. We have had great difficulty in finding a suitable cable with a good-sized central conductor.

About twenty years ago (remember we have been in business a long time) we commissioned a cable mill to make our own pH extension cable type LMK1 with the correct characteristics. We have had sites with cable runs of 100 metres plus operating successfully but do not recommend cable runs in excess of 30 – 40 metres as buffering (see Winter 2010/2011 addition) becomes difficult. The answer is to use a pH transmitter P3630 mounted close to the electrode. All our pH extension cables feature either BNC plugs and sockets with rubber boot or BNC sockets and tag ends for connection to the instrument terminals. It is absolutely crucial that the cable is scrupulously clean, the black graphite conducting screened layer is removed from the centre core at the point of termination. We offer a service for making up cables and carrying out an impedance test before shipping. One last word do not use chocolate block connector and tape them up as this will not work for long in our experience.

LMK1 Cable Construction



THE GRAPEVINE

A regular customer of ours who manufactures and chemically treats special medical components manufactured from exotic materials including Titanium and Hastaloy alloys. Placed an order with one of our OEM customers of many years, for a system to dose precise volumes of any one of five concentrated chemicals into 15 different processing tanks each requiring a different volume of chemical.

We were invited to design a scheme to automate this task, our initial thought were to use 15 dosing pumps and timers.

The end user asked for some form of feed verification of the dosing, so we designed in conjunction with our OEM customer a system with a HMI screen where the chemical to be dosed, the volume and the tank to be dosed maybe selected. This operate a valve which where opened operated a limit switch to ensure the valve had opened before the appropriate dosing pump started.

The PLC system counted the number of strokes the pump would need to make for the required volume, these were counted down by the PLC and compared with a flow sensor to prove the chemical had been dosed.

The system is in and running much to the delight of our customer and the user.

Remember, you heard it on the AWE grapevine.

Automated Water & Effluent Ltd

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