

The Watermark

The Newsletter From

Automated Water & Effluent Ltd

Autum 2009

New Paperless Recorder / Data logger

The SM500

The SM500F is a compact ultra slim paperless recorder designed for panel, surface or pipe (hand rail) mounting designed to IP66 weatherproof rating. The recorder has upto 4 analogue inputs of current, voltage, resistance thermometer (RTD) or thermocouples. With optional flow totalisation each channel has two totalizers for resettable and accumulative totals to be displayed simultaneously and maths function to linearise input signals.

The process data recorded maybe displayed both digitally and graphically on the monochrome or optional colour TFT screen which is user selectable from 18 seconds upto 7 days for the full screen display.

The optional data manager software archives process data and historical logs to an industry standard SD memory card, the removable SD memory card can easily be down loading to you laptop or desk top PC to



reviewed the stored process data. The graphing capabilities provided by the data manager software ensure easy interrogation of the stored process data. The validity of the data files is always checked by the software during the storage and retrieval process to ensure maximum data integrity.

The SM500F has an optional 10 BaseT Ethernet communications via a standard RJ45 connector and uses industry standard protocols TCP/IP and HTTP for connection to existing PC networks by site IT staff.

Exhibiting Ourselves At the Surface World Exhibition 2009 The National Exhibition Centre Birmingham

We are pleased to announce Automated Water & Effluent Limited will be exhibiting at the Surface World Exhibition at the National Exhibition Centre, Birmingham from Tuesday October 27th through to Thursday October 29th.

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

We will be exhibiting items from our range of instrumentation, dosing pumps, high speed and geared mixers.

New on the stand will be the SN500 Paperless Recorder / Data logger come and see this new instrument. Be among the first to see the new SM500 Paperless recorder / Data logger at the Surface World Exhibition October 27th, 28th & 29th 2009.

If you haven't already had a copy of the SM500 data sheet, then please contact Mrs. Vera Young by telephone **01785 254597** or e-mail vyoung@awe-ltd.co.uk.



Technical Tips

Winter Is Coming

Many of our customers use our dosing pumps to dose caustic soda solution under pH control in their wastewater treatment plants (Effluent Plant).

Some customers purchasing departments buy the strongest caustic they can order usually as they feel they are not paying for water and paying for shipping water around the country. This we do not recommend as trying to control the pH of a lightly buffer solution with a very strong reagent is always going to difficult due to the logarithmic nature of the pH titration curve (this will be the subject of another article later). Also strong caustic freezes at a higher temperature than water freezes thus requiring the pumps and dosing lines to be trace heated and lagged to prevent freezing.

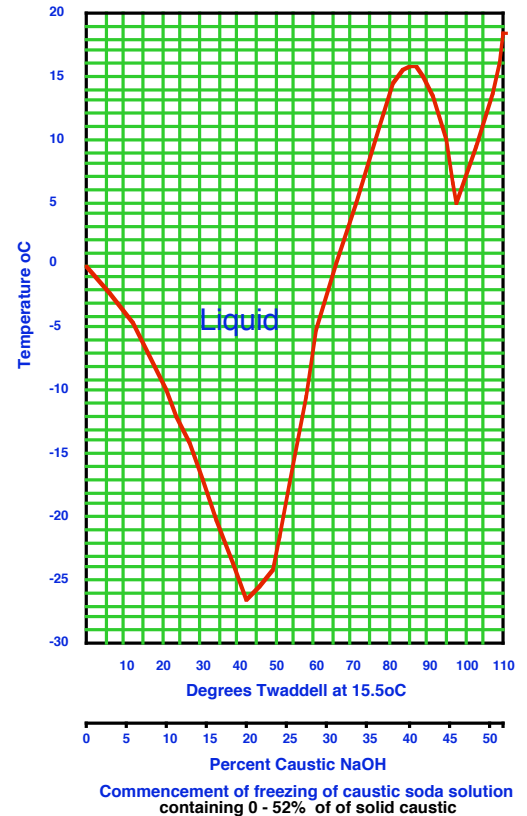
Our suggestion is to purchase your

caustic solution at a suitable strength to resist freezing this will also offer better control of the process with overdosing. Above is a graph of caustic strength Vs freezing so you can identify a suitable strength for your application.

If you require a full size copy please e-mail vyoung@awe-ltd.co.uk for your copy of the caustic vs freezing graph. We will be pleased to help you with any pH neutralisation enquiries.

If you need a full sized copy of the caustic Vs freezing point graph then please contact Mrs. Vera Young by telephone **01785 254597**, or e-mail vyoung@awe-ltd.co.uk with your email address and we will email you an A4 sized copy in a pdf. format

Graph Showing the Freezing Point of Caustic



THE GRAPEVINE

We get many requests for pH neutralising systems to adjust the pH of process water, waste water in a wide range of industrial applications. An interesting one we received recently for a famous confectionary manufacturer where the local regulations would not allow the discharge of the hot alkali boiler blowdown solutions so a simple system was designed and built where the hot blow down solution was diverted to a large stainless steel vessel to act as a balancing tank to cool the solution to an acceptable temperature 43°C was chosen as the local discharge limit.

A double diaphragm pneumatic pump was selected as the forward feed pump to be controlled by both level and

temperature controllers. This was used to pump the solution to a polypropylene mixing vessel for pH neutralisation by the addition of a mineral acid before discharge to drain. The pH of the discharge to drain line was measured and data logged to prove compliance with local regulations.

The whole system was designed and built within 4 working weeks as skid mounting unit requiring just the addition of the waste water, an electrical supply the acid reagent and piping to drain. The unit was ready for collection by the customers selected freight company.

Remember, you heard it on the AWE grapevine.



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