

WATERWIDE

THE INDUSTRIAL WATER TREATMENT SPECIALIST

Issue 02 / 97

March 1997

We're on the Internet!

January 1997 saw WATERWIDE take the plunge and hook up to the worlds largest encyclopaedia... The Internet. What an amazing place. Everything from History to Horticulture and Science to Scenery and a heck of a lot in between.

We started our interrogation (surfing) of the 'net' (Yes, we're already into the terminology) with a quick look at which other water treatment companies we were joining in this information jungle..... Guess what!... Looks like we're one of the first British water treatment companies to take up the technology challenge.

So as well as our regular newsletter, you can now find our web pages via the address below and there is also the facility to e-mail us.

We have kept our web pages technical and informative rather than sales oriented and have included a section on trouble shooting which compliments our technical forum page in the newsletter. We will endeavour to keep fresh information appearing on these pages on a regular basis.

So, if you would like to find our web pages, our address is :

<http://ourworld.compuserve.com/homepages/waterwide>

Not everything in America is bigger!

The US Gallon is smaller than our Imperial gallon. Our Imperial gallon weighs 10lbs (4.54 Kgs). The US gallon weighs only 8.33lbs (3.78 Kgs). To convert US gallons to Imperial Gallons multiply by 0.833

Shutting Down a boiler for the Summer?

Are you aware that there is a section in the British Standard BS2486 which gives guidance on this? Ask your WATERWIDE contact for more information.

Water boils at 100 C° Water freezes at 0°C But water is most dense at 4°C - That's why ice floats

WATERWIDE Personnel Profile

Mark Sadowski

Mark has been in water treatment business for just over eight years. During that time he has had extensive experience on a wide range of plant types including boiler, cooling and effluent and waste water treatment.

Prior to joining WATERWIDE Mark worked with a subsidiary company of Anglian Water where he was involved in the on site trouble shooting of specialised water treatment equipment and effluent treatment plant.

Currently covering much of the service work in the Midlands area, Mark's involvement within the company is growing steadily and he will be introducing himself to many of our other clients throughout the next six months as an additional technical specialist on whom our clients can call.

USEFUL INFORMATION

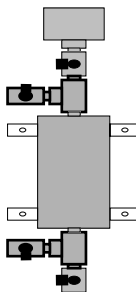
When using the metric system, water volumes are measured in cubic meters (1000 litres) One cubic meter of water is equivalent to 220 imperial gallons. This volume of water weighs one metric tonne (1000 kgs), which equals 2204.6 lbs and is slightly smaller than our 'long' ton which weighs 2240 lbs. Just to confuse things, the Americans have a 'short' ton which weighs 2000lbs.

Which just goes to show there are now TWO things smaller in the States than over here!

CLOSED SYSTEM DOSING

Water systems which are essentially closed such as heating or chilled water systems require water treatment to minimise **scale** and usually more problematic, **corrosion**. Dosing of water treatment and sampling of these system however can often prove difficult.

WATERWIDE have a purpose built closed system dosing pot which allows water treatment to be directly injected into the system water. Discuss your application with your WATERWIDE contact .



USELESS INFORMATION

Prior to metric, the UK had a variety of weights and measures which had colourful if not forgettable names. Rods, Perches, Poles and Chains all spring to mind, along with the volume measurement known as a FIRKIN.

So, for today's useless information, the flow rate of a 'FIRKIN a FORTNIGHT' is equivalent to 2.03 mls / minute.

What else can you do with information like this, **but pass it on!**

Technical Forum

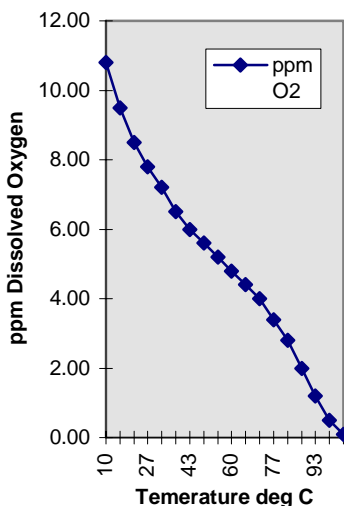
Oxygen Pitting

Oxygen pitting in a boiler plant is often as a result of an improperly implemented water treatment programme or pre treatment plant failure.

Oxygen solubility in water has an inversely proportional relationship with temperature. Thus cold water holds more dissolved oxygen than hot water. At 20 C, water will hold approximately 8 parts per million of oxygen, which is 8 times more than water at 90 C

Oxygen scavengers such as WATERWIDE's B350, B352 and B354 products are typically used to remove the remaining oxygen from boiler feed water to prevent oxygen pitting in the boiler. As the feed water enters the boiler so the water temperature increases very quickly. This causes dissolved oxygen to come out of solution and flash off.

Oxygen Solubility Vs Temperature



A similar example of this can be seen in a domestic electric kettle. When the kettle containing cold water is switched on, the element gets hot. The water in contact with the element heats up faster than the bulk water in the kettle causing bubbles (of oxygen) to form on the element. These eventually rise to the surface. In a boiler, under much higher temperatures and pressures, these bubbles cause differential oxygen gradients to occur on the metal surface. These areas are highly anodic to the surrounding metal which in turn allows a galvanic corrosion cell to set up. Being anodic, metal is lost from this very localised area in the corrosion reaction. Hence the term 'Oxygen Pitting'.

To minimise the attack by oxygen, the feed water temperature should always be kept as high as possible and the oxygen scavenger dosed at a rate which will allow all the oxygen in the feed water to be scavenged leaving a small excess in the boiler water. To increase the speed of oxygen scavenging a catalyst is often used, hence the term Catalysed Oxygen Scavengers.

WATERWIDE

Products and Services

Boiler Water Treatment

Oxygen Scavengers
Sludge Conditioners
Condensate Line Inhibitors
Alkalinity Builders

Special Applications

Rust removers
Defoamers
Closed system inhibitors
Fuel Microbiocides

Cooling Water Treatment

Corrosion Inhibitors
Scale Inhibitors
Microbiocides
Dispersants
Antifoulants

Effluent Treatment

Primary Cracking Agents
Polyelectrolytes
Neutralising agents

Site Water Surveys

Risk assessments for HSG(70)
Water Audits

Laboratory Services

Water quality testing
Microbiological Analysis
Deposit Analysis
Scanning Electron Microscopy
Test Kits

Dosing Equipment

Chemical Dosing Pumps
Tablet Dispensers
Dosing Pots

Monitoring Equipment

Corrosion Test Racks
Sample Coolers

Acknowledgements

Our grateful acknowledgements and thanks to our old 'guvner', mentor and long time friend, **Walter Tinley**, for the very substantial contributions made to this issue and his never ending source of water treatment wisdom.

WATERWIDE

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