



SOLUTIONS

ELECTRONIC FLUID TREATMENT TECHNOLOGY NEWS

ISSUE 2

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ETC Wins Industry Award With Great Acclaim

ETC are finding cause for great celebration after their patented Electronic Descaler was awarded the 100% Detail/RIBA Journal Innovation Award for Best Product.

100% Detail is a selected exhibition sponsored by the Royal Institution of British Architects and is attended by over 12,500 representatives of the UK's building industry. John Thompson, Managing Director of ETC, said, 'Initially, we were honoured to be given the opportunity to attend the event and showcase the technology's ability to eliminate limescale in water systems, but to win a prestigious award from such a distinguished panel was almost overwhelming.'

"The Scalewatcher™ ENiGMA was outstanding in its own right - when ETC made their presentation, our jaws dropped. We referred to it as the 'unsung hero'. It was extremely good value at a very fair price."

Megan Yates, Director, Techniker

Awarded at the exhibition that took place at Earls Court in London, Scalewatcher™ ENiGMA was voted for by an expert panel of architects and eminent figures in the building industry. Megan Yates, Director of Techniker, a leading firm of consulting structural engineers, commented, 'A lot of products are gimmicky, but the Scalewatcher™ ENiGMA is simple, inexpensive and makes a real difference. We felt that ETC needed to be awarded for getting to the 'nitty gritty' of a problem and offering a responsible, straight forward solution.'

"I thought the Scalewatcher™ ENiGMA was a worthy prize-winner because of its effectiveness and economy. You get a lot of 'bangs for your bucks!'"

Jack Pringle, President Elect of the RIBA



Jack Pringle, the Royal Institute of British Architects (RIBA) President Elect felt that the Scalewatcher™ ENiGMA was a worthy prizewinner because of its effectiveness and economy. 'It's an extremely clever product. A simple installation at one point will treat an entire system and cure the curse of limescale, which is like a thrombosis in a building's circulation system. I also like the way it will act retrospectively and gradually clean up a system that is already clogged up. It's a great example of British ingenuity.' RIBA have also awarded their Stirling Prize for architecture to one of ETC's most prestigious clients: 30 St Mary Axe (Swiss RE) in London (more commonly known as 'The Gherkin') with their first unanimous decision in nine years. ETC has also fitted units

to protect The Gherkin's Restaurant's hot water generators. As a direct result of this, an installation has been commissioned for the water and air conditioning systems of one of its neighbours, the tallest building in The City of London, Tower 42, (formally The Natwest Tower). 🇬🇧

"We were impressed by a well researched, simply presented and neat solution to a problem that frustrates all building owners and managers. I believe the Scalewatcher™ ENiGMA will save a lot of wasted energy and money - we all wanted to order one right away for our homes and offices!"

Robin Nicholson, Chairman of the 100% Detail Judging Panel



The M.O.D's choice of Water Treatment

ETC is playing a valuable role in the success of Defence Estates' multi-million pound SLAM project to upgrade Single Living Accommodation for members of the Armed Forces. Currently, four hotel-standard barrack buildings per month are being equipped with electronic water treatment units. This 10-year project will eventually supply 30,000 much improved en-suite bed spaces to SLAM sites across the UK.

The **Scalewatcher™ENiGMA** units will be used to protect hot and cold water systems from deterioration and loss of performance due to limescale. It is estimated that the installations will save £millions over the life of the buildings.

While there are no figures available for military establishments, it is estimated that limescale costs UK industry over £1billion a year in descaling alone. Further £billions are wasted through lost production, higher energy bills, and early renewal of capital equipment. There are also environmental costs linked to the higher fuel consumption necessary when pipes and heat exchangers are heavily fouled with limescale.

Prime Contractor, Debut Services Ltd, (jointly owned by Bovis and Babcock), design, constructs and maintains the SLAM buildings. They became concerned about the damage to

water systems due to limescale as they are required to hand over SLAM buildings in an 'as new' condition after seven years. Not wishing to incur the considerable cost of replacing hot water systems, it first considered conventional means of water treatment, using salt-fed softeners,



however **Scalewatcher™ENiGMA** proved to be more convenient, more compact and better value. It was doubly attractive because ETC focuses on product and service quality and high standards of

installation, commissioning and long term monitoring.

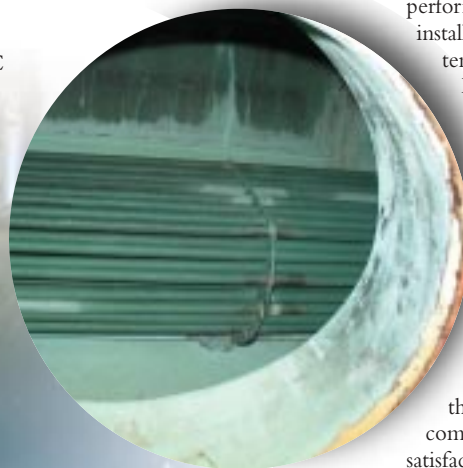
The system was chosen because of ETC's unrivalled success in providing a real and effective alternative to base exchange salt softeners. This would have cost around £188,000 over the design life of each building. In comparison the whole life cost (WLC) of the non-chemical method was estimated to be just 1.6% of that amount, with the added benefit of it not destroying the potability of the drinking water. When looked at in terms of the overall project, Debut's figures indicate a saving of some £75million.

SLAM update!

Despite carrying out 'due diligence' enquiries, there often remain a few people who are still sceptical, which is why ETC has developed successful techniques for performance monitoring of their installations, using sophisticated temperature data logging etc.

However, there is nothing quite like 'the mark-1 eyeball' for confirming the efficacy of the treatment. In the case of SLAM, this was achieved by opening up one of the first installations, at Royal Marine Poole, after 9 months in operation in one of the UK's hardest water areas. To the delight of the SLAM compliance team, and the quiet satisfaction of ETC, the calorifier and its heat exchanger had remained exceedingly clean.

The successful working relationship with the MOD, developed since 1989, and the more recent success with the SLAM team has led to many other installations at prestigious military sites in the UK, saving the taxpayers many millions of pounds. In addition to significantly reducing CO₂ emissions, other environmental benefits have been realised, such as reduced use of chemicals and not having to replace water-fed appliances and equipment so often. ■



Inspection of the calorifier's heat exchanger



Cash Back for John Lewis through Energy Savings

One of the UK's biggest department store and supermarket organisations has turned to electronic water treatment technology to help reduce its maintenance and running costs for cooling and hot water systems. Units have already been installed in stores and staff facilities in hard water areas of southern England and a rolling program of installations will continue into the future.

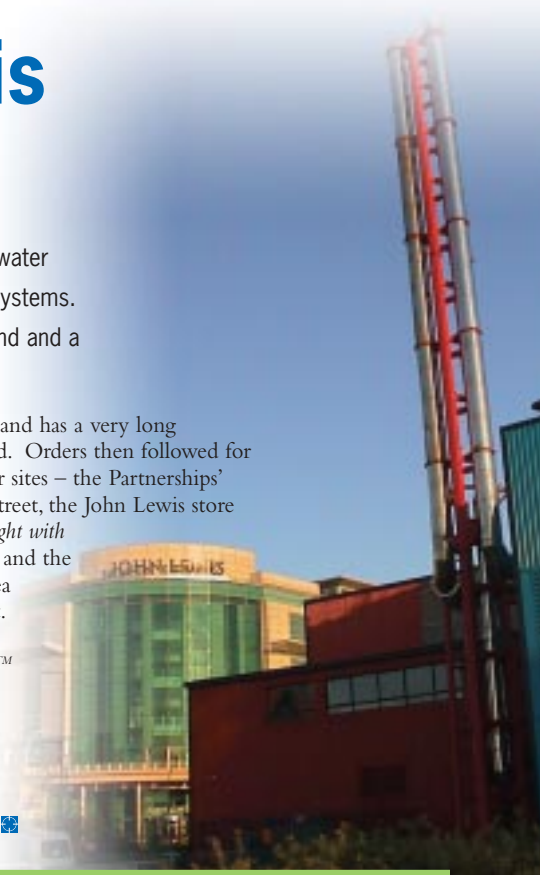
The John Lewis Partnership's heating, ventilating, air conditioning and electrical surveyor Graham Mappedoram was fairly sceptical when a colleague first recommended **Scalewatcher™ ENiGMA**. Nonetheless, he accepted an invitation from ETC and gained a good first impression on seeing the technology in action at Southampton Geothermal Heating Company Ltd.

This led to an initial installation at the Waitrose supermarket in Caversham. After

three months the calorifier was opened to reveal that the interior surfaces were no longer coated with hard limescale. Instead there was just a soft powdery sludge that would be flushed away in the normal use of the system. It would no longer be necessary to use acid or chip off limescale, enabling the system to operate in a more energy and cost efficient way and greatly prolong its active life.

"I was thoroughly convinced by the experience we had in Caversham and was doubly attracted by the fact that the technology

required no maintenance and has a very long working life," Graham said. Orders then followed for installations at three major sites – the Partnership's flagship store at Oxford Street, the John Lewis store in Southampton (*shown right with Southampton Geo Thermal*) and the JLP staff club on Brownsea Island off Poole in Dorset. Through this inexpensive method, the **Scalewatcher™ ENiGMA** has helped to make some of the Partnership's premises more comfortable, cost effective and environmentally friendly. 



Sweet Success at Caribbean Hospital

ETC has gone tropical! Electronic water treatment units have been installed in the Queen Elizabeth II hospital on the Caribbean island of Barbados.

Eighty-six percent of the island of Barbados is made up of a karst landscape of deeply fractured and gullied limestone laid down in a series of limestone terraces, deeply incised by numerous gullies and underlain by a complex underground cave system. Water drawn from deep underground is, therefore, exceedingly hard.

Located in the capital city, Bridgetown, the hospital's hot water systems have constantly suffered from the build up of limescale, reducing water-fed equipment's efficiency, increasing risk of break downs and requiring maintenance that involves a great deal of time and money.

Applications at the hospital that are particularly troublesome include steam generators that sterilise medical equipment and autoclaves that wash and sterilise


surgical instruments used in the operating theatres. The higher the water temperature, the greater the amount of precipitation, so at running temperatures of 130°C these applications present the biggest challenge.

ETC received the enquiry for their environmentally friendly solution to limescale build-up through their website. The Hospital Engineer, UK trained David Green, was so impressed with ETC's success solving problems in St Thomas' Hospital in London that he decided to go ahead with a number of applications. One month later a small team flew out to Barbados to fit 8 units.

In a very short time David Green knew the technology was effective on the local hard water.



The mechanic who maintained the autoclaves previously had to acid clean the elements every 6 weeks. After 18 weeks he inspected them out of curiosity and they were found to be still quite clean. ETC has since installed further units on a second visit to the island.

The hospital engineer is now keen to help ETC extend their services in Barbados, alerting other interested industries such as the island's dairies, sugar cane processing, breweries, distilleries and ice makers, to the benefits of reducing limescale in their water supply. An ice cream manufacturer has subsequently placed an order for treating and protecting a refrigeration cooling system. 



ETC Announce Office Expansion

As a result of increased business activity, ETC has expanded their headquarters in Hampshire. Having been based at the rural North Park Business Centre near Fareham for the past 6 years, ETC has taken over the adjacent offices and orchestrated a complete restructuring of the company to reflect rapidly growing sales and wider acceptance of its unrivalled electronic water descaler.

After attracting a great deal of attention from architects, builders and engineers from across the world, an increasing number of companies are turning to the **Scalewatcher™ENiGMA** in an effort to save the time, labour and money used when elements of their water systems need to be replaced.

‘Being in a position to expand our offices is obviously a tremendous boost to the company and the morale of our staff,’ says John. ‘We are finding that the positive word of mouth and

winning awards such as the national 100% Detail/RIBA Journal Innovation Award for Best Product is contributing to our great increase in sales.’

New staff are welcomed to the ETC team

The recent office expansion at the headquarters of ETC in Hampshire has come at the best possible time. To maintain the service of a company renowned for its high levels of customer care and support for a rapidly increasing client base could only have resulted in the need for recruitment.

One of the first steps was the promotion of Samantha Thompson to the position of Director in the business. Sam has undertaken responsibilities for administration, sales and marketing, as well as the internal co-ordination of ETC’s numerous activities not just in the UK, but across the world.

In addition to Sam’s administration support team increasing in number, a new stock controller has been added to the finance department to manage the

increasing demand for ETC’s revolutionary water treatment product, the **Scalewatcher™ENiGMA**.

‘In our industry, it is always tempting to focus on the client-facing engineers and the product, but without an enthusiastic, dedicated support team and structured internal procedures, companies can jeopardise their customer service,’ explains Sam. ‘It is my job to make sure that never happens.’

ETC has also welcomed two new engineers into the fold. Taking responsibility for areas in the north east and western regions of the UK, the company is now in an even stronger position to deal with clients across the country.

‘Welcoming new faces is always exciting and we can already see the benefits of the additional experience and expertise that compliment our highly skilled team of specialists,’ concludes Sam.

Jolly Hockey Sticks from ETC

Environmental Treatment Concepts is proud to announce the sponsorship of Fareham Ladies 1st XI hockey team. Samantha Thompson, Director of ETC, who plays left back for the squad and is Captain, is delighted that the company is supporting both her and her team in their impressive recent track record.

‘I’ve played hockey since I was in senior school and played at County level for Hampshire’s under 18 team,’ recalls Sam. ‘After a break of a few years to start my career, I began playing again three years ago with the Fareham Ladies.’

‘I initially found the training regime rather grueling – we have a weekly fitness session, two hour training practice once a week, then play our matches every Saturday – but now I feel great and am pleased with my performance on the pitch.’

Sam isn’t the only one to recognise her greatly improved hockey skills. Awarded ‘Ladies

Player of the Year 2004’, she plays for a team that is going from strength to strength – it was recently promoted to the premier Hampshire division after winning its spring season.

‘Obviously we are proud of both Sam and the Fareham Ladies’ achievements, says John Thompson, Managing Director of ETC, whose contribution will provide new shirts for the players. ‘It is always important for companies to support local talent and we are extremely pleased with our sponsorship of the team.’



Business enhanced at Barnham Mill

A grade II listed building, Barnham Windmill in West Sussex is both a tourist attraction and a successful tearoom and restaurant. However, the key to its success lies as much in its use of technology as its olde worlde charm, with electronic water treatment units protecting the restaurant's two steam ovens from the effects of some of the hardest water in the UK.

Owner, Barry Lee – a chartered mechanical and electrical engineer who has spent most of his career in the construction industry – bought the windmill ten years ago. The task was to restore the buildings, taking advantage of an existing planning consent for a tearoom, and enter the restaurant business.

In order to operate the restaurant more effectively during peak periods, Barry purchased two Rational steam ovens to heat pre-cooked and refrigerated plated meals quickly.

However the hard water from the solid chalk Sussex Downs was potentially a serious problem. “There had to be a better solution than buying a set of new elements

for each oven every year,” said Barry. Even then, the ovens had to be stripped down and descaled twice a year to remove the limescale deposited by the hard water. Having read about **Scalewatcher™ENiGMA**, Barry contacted ETC and purchased units for use on the boiler and calorifier as well as in the kitchen. He estimates that the saving on maintenance costs for his steam ovens is some £1,400 a year, while the running costs of the treatment units is just £5 per unit per year, and the ovens work as well as if they were operating with a new element all the time.

In addition, the old cast iron radiators, in use in the main restaurant area, function room and

bar, are now free of limescale, despite the use of some of the hardest water in the UK. Barry has been able to turn the boiler down as a result because the heating is now more efficient. He also saves on the cost of heating and the emissions that contribute to global warming.

“Initially I was slightly sceptical. Now I cannot imagine life without this water treatment system. There are no longer worries over possible breakdowns, while ETC provides excellent support and advice. **Scalewatcher™ENiGMA** has made all the difference to my business.”



London Borough Cuts Costs of District Heating

Southwark Council has embarked on a scheme to improve the performance of their district heating systems serving its residential estates, through the installation of Electronic DeScalers. Benefits will range from more reliable heating and hot water supplies for tenants to a combination of major cost savings and fewer operational headaches for the council departments involved.

In the 1960s and 70s when large estates were built in Southwark, to house London's burgeoning post-war population, district heating was considered the best way to provide heating and hot water to hundreds of flats. Unfortunately, the impact of hard London water on the district heating infrastructure was either not fully considered or not seen as a potential problem in the economic climate of the time.

Over the years, however, limescale has been deposited in the water pipes and the heat exchangers serving the individual

blocks of flats. This reduces the efficiency of the heating systems so that it costs the council more than it should to provide the services residents need. It also damages plant and equipment, leading to higher planned maintenance costs and more frequent break-downs.

However, the installation of the patented electronic water treatment units is quite literally dissolving the problem. To the delight of Heating Manager, Phil Barnes, an inspection just a few months after installing the initial units revealed that limescale had been removed from heat

exchangers serving the Brimington estate.

“The difference was dramatic as a badly ‘furred’ heat exchanger was made quite free of limescale within four months,” he said. “We liked the look of **Scalewatcher™ENiGMA** from the specification we received from ETC and it has certainly performed beyond what we expected,” Phil added.

Initially 33 units were installed on the Brimington, Silverlock, New Place and Aylesbury estates and to serve residents in Ullswater Court, and the Pedworth sheltered housing schemes. Following excellent results achieved by these units, Southwark has decided to proceed with the second phase and have commissioned a further 45 units.

ETC contributes to London's first environmentally friendly skyscraper

For three years London watched the Swiss Re Tower gradually spiral out of the ashes of the bombed Baltic Exchange site in the heart of the financial district. 30 St Mary Axe, or 'The Gherkin' as it is better known, is London's first environmentally friendly skyscraper. Within months of its opening it has already established itself as an iconic architectural structure, looming 180 metres high in the city skyline.

The tower that covers 76,400 square metres was designed by Lord Norman Foster to embrace the latest in environmental planning that reduces energy consumption. Its uncompromising modernity is allied toward a sensitivity to the natural environment and a comprehensive range of sustainable measures which mean that the building uses up to 50% less energy than a traditional prestige office building.

One of these measures was the introduction of the Scalewatcher™ ENiGMA into the hot water system situated in the 35th floor plant room. ETC engineers installed the water treatment units to ensure the prevention of limescale build up was in keeping



with the high efficiency and low energy waste philosophy of the building.

The ground-breaking structure won the Stirling Prize in 2004, a top architectural award from the Royal Institute of British Architects (RIBA). For the first time in the award's nine-year history, the jury's decision was unanimous.

30 St Mary Axe is a radical building: socially, environmentally, technologically, spatially, and architecturally. The design is a paradigm of the responsible environmental practice that is a quest for both the client and architect.

'We are delighted to have contributed to such a pioneering architectural project that focuses on the environment,' said MD John Thompson. 'To be associated with such a national icon is a tremendous boost to the company.'



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