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## 2500 years of metallurgical experience

*Whilst the level of metallurgical knowledge in general engineering appears to be on the decline, the expertise of CHTA members continues, of necessity, to be vast and cutting-edge. TTI Group's Keith Laing comments...*

The Iron Age in Britain started around the 7th century BC, following the Bronze Age when our metalworking skills were initiated. Ever since then, we have been using and developing the products of iron and steel making.

Some would say the treatment processes introduced in the early days haven't really changed. However, the reality is that heat and surface treatment of metals has been in perpetual steady development in reaching today's high levels of sophistication.

Within CHTA member companies there are over 2500 years of metallurgical experience spread across every possible metal treatment. Continuous updating of that huge knowledge base is largely a by-product of competition within our sector.

As well as keeping up with the changing demands of industry, contract heat treaters must stay abreast of the latest advances in heat treatment technology and process techniques in order to survive. New equipment is purchased which has all the latest technology to allow for more-efficient cleaner processing, in conformance with ever-changing HS&E guidelines.

Indeed, legislation plays its part in the progress within heat treatment. For example, changes in regulations, resulting in materials and substances becoming more tightly controlled, mean that treat-

ment procedures that have been carried out in the same way for decades have to change. This can be quite an upheaval for some companies.

The current perception is that, outside of companies where heat treatment is the core business, the amount of metallurgical knowledge is slowly eroding through retirement. Graduate metallurgists are becoming harder to come by. Whilst there is a process of continual appropriate training within the contract heat treatment sector, the same cannot be said for all other industries where heat treatment is performed in-house.

The vast experience and awareness of latest techniques, treatments and processes is often now largely confined to contract heat treaters. Designers may not be aware of alternative processes and materials available to them. Contract heat treaters can provide solutions to industry through their broad expertise and use of the latest technology.

Quite apart from the perceived declining knowledge within some in-house heat treatment operations, processes carried out in-house often result in being more expensive due to the ageing equipment and increasing cost of regulatory compliance.

CHTA members have a wealth of knowledge and metallurgical expertise, dating back over millennia but ever abreast of new developments. With the latest process techniques employed to meet latest quality-assurance requirements fully, CHTA's network of commercial heat treaters should be consulted as an exceptional resource.

### CHTA Secretariat

Items for inclusion in *Hotline* and enquiries about CHTA activities should be addressed to:

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CHTA Secretary and *Hotline* Editor:  
Alan J. Hick B.Sc., C. Eng., FIMMM

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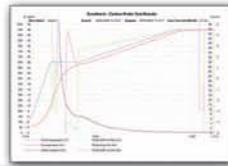
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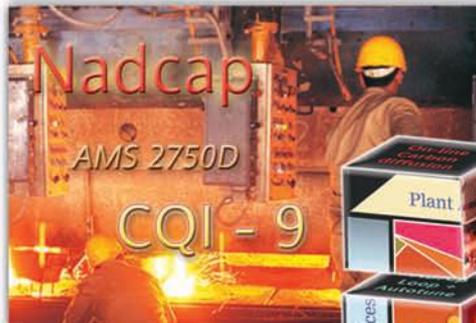
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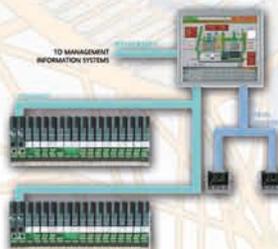
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## Rising Energy Prices – the Beginning or the End?

With gas/electricity constituting a substantial proportion of operating costs in energy-intensive contract heat treatment, the impact of recent steep price increases is dramatic. Regular Hotline contributors **CMR Consultants Ltd** (part of ENER-G plc, Energy Management Division) comment.

The UK is being hit by higher and higher energy prices almost on the scale of Hurricane Gustav! Our “levees” - UK North Sea gas reserves - have dwindled to quite low proportions, making us vulnerable to the ebbs and flows of imported energy, be it from Norway or the main European Continent.

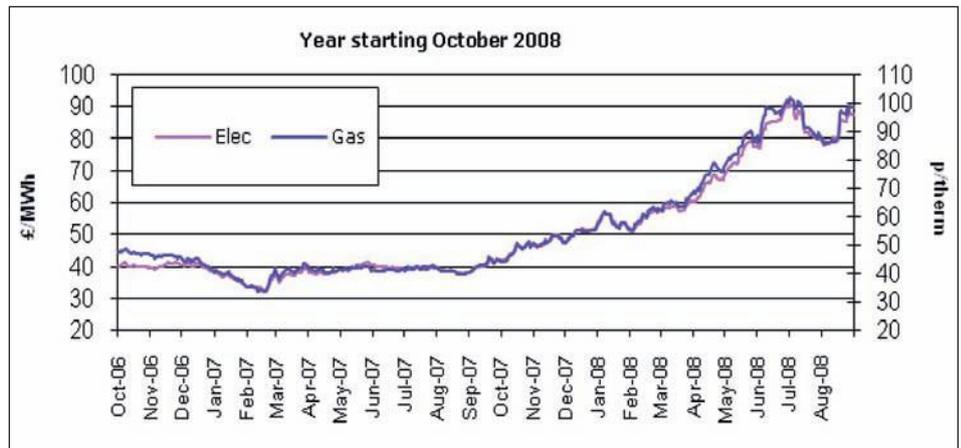
Added to the fact that energy prices are sensitive to many other price drivers such as weather, politics, plant outages, concerns about UK power-station capacity, etc, etc, any attempt at predicting prices, even a year ahead, is perilous to say the least.

Some forward markets are in “backwardation”, a term used when future prices are lower than near-term prices, which is opposite to normal market fundamentals; i.e. future prices should reflect the time factor and be more expensive than near-term delivery!

### Are rising energy prices at a beginning or end?

Depending on when the last contract was closed, for many businesses, especially those on FIXED-price contracts, the average increases range from 40% to 60% for an October 2008 renewal.

For the lucky few that got very good prices previously, unfortunately the increases are even larger! One ENER-G customer, who signed a 5-year gas deal in 2004 at 45p/therm (which at the time was regarded as a bit expensive), is now facing a price of 103p/therm in 2009, a 225% increase! But no doubt the client has enjoyed the cost benefits relative to their competitors and



Weighted average wholesale gas and electricity prices covering the previous two years. (Source: CMR Consultants)

against a rising market.

At this point, it is worth recognising that energy markets are driven primarily by supply and demand, with politics/weather/speculators etc creating temporary but important influences as far as timing of contract closures is concerned. The closer these latter influences are to your contract renewal, the bigger impact they can have on the deal you can strike. As has been said in the past, for FIXED-price deals the most important factors are timing, timing, timing!

With access to real-time market trading information, it is possible to review near-future outlooks - two years ahead for electricity and three years for gas - but giving an actual prediction ahead of time is impossible. With that said, it is important to analyse market trends in relationship to each customer's contract renewal date and budget aspirations.

The accompanying graph shows the wholesale energy price trend over the past two years and illustrates the close correlation between gas and electricity. It can be seen that wholesale prices were falling through the last quarter of 2006 as market drivers were favourably positioned: i.e. new infrastructure, such as the Langed pipeline and upgraded Inter-

connector, to improve security of supply, and demand lower than previous year.

In addition, the easing of tensions in the Middle East prompted oil prices to fall from around \$80/barrel to around \$60/barrel. By February 2007, energy markets reached their lowest level in recent times, with a weighted average contract commencing October '08 priced at 32p/therm for gas and approximately £33/MWh for electricity. How things have changed in a short time! With same period comparisons, gas is now around 99p/therm and £87/MWh for electricity – an increase of approximately 209% and 164% respectively.

### What are the key drivers fuelling this upward trend today?

The reliability of imported gas supplies and delayed decisions over replacement new nuclear generation capacity have fuelled speculation over recent months and contributed towards the rising trend seen today.

In August 2008, the Norwegian Kvitebjørn field was shut down following a leak on an adjacent pipeline. Maintenance is not scheduled until spring 2009, leaving the UK market in a state of uncertainty with regards to supply this winter. As a result, wholesale gas prices for winter 2008

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added over 10p/therm, or approximately 12%, in a single gas day.

Oil price has also continued to drive the price of futures contracts throughout 2008, with Brent hitting \$147/barrel in July '08. However, in September '08 it dropped to \$106/barrel, although wholesale prices have not softened to the same degree!

This has led various commentators to suggest that an alternative and primary driver is lack of competition and that the UK market no longer works as it once did in terms of delivering competition. It is alleged that suppliers are using the oil market as an excuse for "driving up margins".

With the UK market having shrivelled from over 15 suppliers of gas and electricity, at privatisation, to today, where we have just a handful of suppliers (as a result of mergers and acquisitions) owned by European energy conglomerates, there is clear concern as to whether we really have genuine competition.

#### What can businesses do to mitigate the effects?

There is no simple answer as the wholesale price of energy largely dictates what industry will pay. For the next few years, and for all the reasons mentioned earlier, the general consensus is that prices will continue to rise and, so, no END as such. For those businesses with larger volumes of energy, one option to consider is FLEXIBLE purchasing, but this has to be wrapped round a sensible risk management strategy. The benefit is that there are no "spiked" or "surprise" increases at the end of each contract period (the biggest concern for most businesses), rather a gradual increase in prices but also taking advantage of short-term reductions as and when these occur.

It would be prudent also to revisit energy management opportunities in terms of cost-saving measures to reduce consumption. To better understand exactly what efficiency options are available today would require the services of an experienced energy consultant. For example, the latest factory lighting technology (sodium and metal halide lights) can reduce electricity usage by over 30% - a saving not to be ignored in the current high-price energy market.

*Submitted on September 5th, this article was written for CHTA by Chris Hyndman of CMR Consultants Limited and Dr Cedric Rodrigues, Managing Director, Energy Management Division, ENER-G plc. Some of the views expressed here are personal and do not reflect those of the company. Prices are weighted averages for a specific consumption profile.*

## CCAs – latest developments

*SEA's Dave Elliott updates on Defra's CCA target review announced in Hotline 112. Further input from CHTA members is needed urgently.*

At the recent Climate Change Agreement target review meeting with Defra, the Heat Treatment Sector was ably represented by Kevin Rowen (Alpha-Rowen Treatments Ltd), Deryk Law (Clayton Holdings Ltd) and Terry Armstrong (Data Energy Services Ltd). We supplied Defra with a considerable amount of data regarding the sector and recommended the following points:

1 – When the original agreement was set up, the target savings profile of 1%, 1% and 6% was agreed on the understanding that the 6% saving would be reviewed in light of performance at Milestone 4. This agreement should be honoured.

2 – Any decision on reviewing targets should be postponed until Milestone 4 data have been assembled, examined and assessed in light of point 1 above.

3 – Targets should only be adjusted once a Carbon Trust survey has been completed and the level of potential savings has been identified. The surveys should be carried out by people with experience of energy saving in the heat treatment sector.

4 – Any tightening of targets should not harm business competitiveness and should take into consideration the capital investment cycles of small businesses and the current state of the financial markets.

After much discussion, Defra stated that they could not accept a 'no change' situation and asked SEA to provide, by no later than mid-October, a counter proposal with supporting information, to include:

- Further evidence on the efforts made by the sector as a whole to improve energy efficiency, beyond reference to Carbon Trust reports (most of which would have focussed only on energy management and not covered core processes). Information should be given on past and planned actions, including capital costs, and should be set in the context of the whole sector; i.e. if x companies have upgraded their compressed air systems at a cost of £y, what percentage of the sector does that represent by energy or throughput.
- Evidence on factors that might limit the scope for further cost-effective savings.
- Information on market conditions that may affect target achievement.
- Information on developments within the industry (e.g. on levels of throughput, use of capacity, rationalisation) that

might affect target achievement, both for recent years and forward looking.

- Information on performance in MS4.
- All companies in Climate Change Agreements will have received a request for further information, as above, along with a request to suggest the level of tightening of targets they could possibly achieve.
- Defra's default position is a tightening of the 2010 target by 10.1%. Given that the 2010 target is a 6% saving anyway, the default position will be impossible for the vast majority of companies to achieve, so **we really need your help in producing an acceptable alternative for Defra.**

### TRAINING

## Understanding Heat Treatment

*Readers are reminded that Wolfson Heat Treatment Centre's three-day course "Understanding Heat Treatment" is being repeated on **October 14-16** this year at BJGFF's Federation House headquarters in Birmingham.*



The aim of this well-established course is to convey a general appreciation of the metallurgical/technological background to industrial heat treatment processing. It examines the various processes, how they are carried out and controlled, what they seek to achieve in structures and properties, and the problems that can be encountered.

With the emphasis on steel heat treatment, the basic syllabus for the course has been compiled by industrial members of the Centre and talks are presented, in the main, by speakers from industry. The following topics will be covered:

- basic metallurgical theory of heat treatment;
- quenching principles and practice;
- surface hardening theory and practice;
- furnace types, materials and heating methods;
- temperature measurement and control;
- salt-bath heat treatment;
- controlled-atmosphere heat treatment;
- vacuum heat treatment;
- fluidised-bed heat treatment;
- quality control/assurance in heat treatment;
- computer software to assist the heat treater.

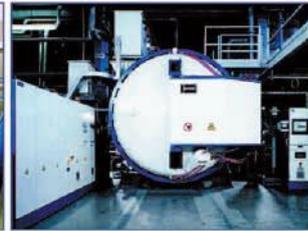
For full registration details, contact Derek Close, Wolfson Heat Treatment Centre, Federation House, 10 Vyse Street, Birmingham B18 6LT (tel: 0121 237 1122; fax: 0121 237 1124; e-mail: [derek.close@sea.org.uk](mailto:derek.close@sea.org.uk); [www.sea.org.uk/whtc](http://www.sea.org.uk/whtc)



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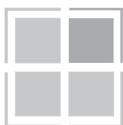
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## Experience with a Knowledge Transfer Partnership

In *Hotline 104*, Richard Burslem of Wallwork Heat Treatment Ltd. reported initial impressions shortly after entering into a Knowledge Transfer Partnership (KTP). His colleague Peter Carpenter now relates Wallwork's experience after completion of the project.

### Initiation

Our KTP project was initiated by a cold telephone call from our local Business Link. In the subsequent meeting, typical project options were discussed, the main criterion being that there must be a benefit for UK industry.

An energy-saving project was outlined, with benefits to the environment (reduced CO<sub>2</sub>) and to the Government (increased corporation tax payments on the increased profits). I was surprised that increased profits could be the main benefit of the project.

Sheffield University was identified as a suitable partner as they were running a Business Outreach Programme, which meant that they had a designated person to complete the bulk of the application paperwork and give advice on the format of the project.

Once the project had been accepted by Momenta (a division of AEA Technology, who manage the projects on behalf of the DTI), the University organised recruitment, after agreeing the job description with us. Most of the applicants were overseas students; apparently most UK students look for higher salaries rather than structured training!

### The KTP associate

Interviews were carried out jointly with the University and we appointed a Chinese student (KTP associate), who had just finished an MSc in Environmental & Energy Engineering. The objective of her 27-month project was to identify, specify and implement energy saving in our heat treatment process.

The associate earns between £18-20,000pa and the cost to the company is approximately £16,000pa. The company can also claim about 50% of any reasonable anticipated costs in running the project (e.g. cost of meetings, travel, laptop, testing and monitoring equipment, etc). All invoices must be submitted to the University for payment; in our case this amounted to £25,000 over the 27 months. The employment situation is unusual as the University employed the associate, but she worked within our terms and conditions of employment. Although this

caused us no problems, I would imagine that any disciplinary situations could have been awkward.

Associates are obliged to spend 10% of their time at the University, although this can often be used in research for the company. The associate must also take further academic qualifications; 20 days of the project time are used for this, with any other study in the associate's own time.

There are obligatory monthly meetings, run by the associate with the company and the University, where each gives a progress report, including a finance report from the University. Every three months, there is a more formal meeting, with a representative of Momenta present, chaired by the company.



### Successful outcome

In our case, the project was well worthwhile, with a £40-50kpa saving in our energy costs and more potential identified for the future. Our KTP associate returned to China at the end of the project, which is always a possibility with an overseas student, although 70% of associates stay with the company at the completion of a project.

The KTP partnerships are ideal for larger projects which are expected to have specific and tangible results. Funding is now available for projects between 12-30 months and they are a relatively cheap way to recruit good graduates and have access to University facilities; but remember that they must keep working on the project without too many distractions. There must be a commitment of management time (for meetings, reports and supervision etc.) and a willingness to work within the KTP structure.

Overall this project has been worthwhile to us and I would not hesitate to enter into another KTP with Sheffield University, providing the project was suitable.

## Salt costs

Sir - With the massive increase in the price of energy, industry is currently having to look at every which way it can to cut costs. We are telling our employees that we must save energy, bringing to their attention that energy not used properly is waste.

This is quite ironic, as the cost of disposing of waste heat-treatment salts has hit an all-time high. Compared with 2007, the cost of disposal of some spent salts has risen by as much as 400%.

At Tamworth, over recent years, we have reduced the volume of items processed through salt. Could the continually-rising cost of purchasing and disposing of the salt media sound the death knell for salt-bath heat treatment?

Those of us who, historically, have always used 'salt' are probably thinking of looking at other methods to treat work. The obvious problem that such a change brings is financial. With the well-documented credit crunch, investment in new or used equipment is not easy. For some, this could be final straw that the camel did not want!

As we are all looking to be environmentally green, are we in a situation where the waste companies are seizing the opportunity to 'make a killing'? At least with energy, hopefully we have a fighting chance to try and pull back some of our costs; who can we call on to help us with our waste salts?

The current scenario must also be a major concern for the salt suppliers as they have energy price rises to contend with, just like everyone else. This is obviously the case as they have just had to increase their prices. *Could it be that they may also have the technology to help with the disposal and, in some cases, the neutralisation of waste salts?*

As a service industry, we have a 'duty of care' to give our customers a value-for-money service. It's a pity that our suppliers do not appear to think the same.

**Kevin Bannister**

Tamworth Heat Treatment Ltd

**Spread the word by proclaiming your CHTA membership**



For use on company letterheads, literature, websites and advertisements, members can download CHTA's logo from the Members Area of the Association's website.

# Looking back on 31 years as MTI's CEO

**M. Lance Miller, JD, CAE** retires shortly from the post of Chief Executive Officer of the Metal Treating Institute, CHTA's sister organisation in North America. Here he reflects on MTI achievements during his long and fruitful term in office.



What started as a break-off from what is now ASM International (because that organisation was not tending to the basic economic needs of heat treaters), the Metal Treating Institute has grown, from a membership of fourteen companies in the Midwestern US, to nearly 350 corporate members worldwide and a budget of approximately \$1million. It is unquestionably the largest network of heat treaters in the world.

This fall marks the institute's 75th anniversary and, along with the gala celebration to be held in conjunction with *Furnaces North America 2008* in Nashville, Tennessee, there will be a changing of the guard in the executive office.

I have been fortunate to serve as MTI's chief staff executive for 31 of these 75 years. But just as my predecessor, Herb Herington, after 22 years at the helm, was faced with a changing membership demographic (younger heat treat ownership and management), I, too, feel that it's time for a change. And besides that, sometimes in life you simply realise that it's time to do something else; everything has a time and a season.

## Changes

You never want to overstay your welcome (well, maybe I have); so I will retire at the conclusion of the *Furnaces North America*



Tom Morrison becomes the new CEO of MTI in its 75th anniversary year.

event in October and turn the reins over to a very capable (and younger) Tom Morrison, who currently serves as my deputy, the Executive Vice President. Tom is a seasoned association professional who brings a combination of exuberance, marketing skills and a different way of communicating to our various universes ... all traits that are required in our ever-changing industry.

The industry's challenges and opportunities that exist today are not so unlike 31 years ago. The main difference is that our industry is playing on a worldwide stage and the actors are different. And the ways of communicating and otherwise interacting with these actors are different.

While technology has changed all that, the dynamics of working with people, forming alliances and leveraging where possible, still exist. There still is strength in numbers! And MTI is growing its numbers every year to the benefit of its member companies.



Lance Miller, at a 1990 MTI reception in Copenhagen, flanked by then CHTA Chairman Doug Goldstraw (left) and CHTA Secretary Alan J Hick. Since that time, Lance has been a valued occasional contributor to Hotline.

## Achievements

Thanks to the dedication of countless volunteers and a small, but extremely efficient staff, there have been many highlights during this tenure. Here are some MTI achievements of which I am most proud:

- MTI grew its membership almost 100% and evolved from a US-only trade association to one that is international in scope.
- It has increased its profile within the US government affairs arena and has forged a tight relationship with the National Association of Manufacturers, America's strongest manufacturing lobby.
- Acquired *Furnaces North America*, North America's largest "heat treat only" trade show.

- Developed MTI Academy, recognised as a leader of online training, with over 50 courses available 365/24/7.
- Inaugurated a Young Executive Seminar (YES) series that trains younger managers in the industry.
- Developed a Property & Casualty Insurance Program, earning substantial savings for our members.
- Increased our involvement in third-party accreditation programs, i.e. *Nadcap*, CQI-9, etc.
- Developed an Energy Buyers Program that saves members natural gas and electricity costs.
- Expanded annual management information and benchmarking surveys.
- Established telephone hotlines with 15 technical and business consultants.
- Established *Heat Treat Quotemaster*, an automated RFQ website linking heat treaters with potential customers.
- Developed a comprehensive user-friendly website which includes a member directory and a Members-Only section.
- Established "special interest groups" (SIGS) with their own listservs (e-mailing list servers).

I'm very proud to have been associated with the incredible people of MTI for nearly half of my life. There are none better. Any non-member company, be it a commercial heat treat, captive heat treat or supplier to the industry, would be making the best business investment it ever made by joining MTI, the best of the best the industry has to offer. It's been proven for 75 years and counting.

## The future

As for me, the best years may be ahead. As a type-A person, I'll stay busy and very likely connected in some way to the industry that I love and has been very good to me and my family. It has also been a pleasure, during these years, collaborating with our sister organisation, CHTA and your Secretary, Alan J. Hick. I wish all of you the best of luck in the future.

*CHTA's best wishes go out to Lance, for a long and happy retirement, and to Tom Morrison as his successor.*

Please send your news items for **Hotline 114** to [mail@chta.co.uk](mailto:mail@chta.co.uk)  
**Deadline: November 28th**

## Member news

### BODYCOTE SELLS TESTING BUSINESS

Bodycote announced at the end of August that it has entered into a conditional agreement for the sale of its Testing Strategic Business Unit to Clayton, Dubilier and Rice, a private equity firm, for approximately £417million. The sale, which is conditional on the approval of Bodycote's shareholders and the receipt of regulatory approvals, is expected to be completed by the end of October.

Following the sale, Bodycote expects to accelerate the improvement in the financial performance of its Thermal Processing Business through increasing the amount of high-added-value and specialty processes, further expansion in emerging markets, and by restructuring under-performing facilities, especially in North America.

Bodycote's Testing Business provides technical and engineering services to the aerospace, energy, oil and gas, civil engineering, transportation, pharmaceutical, food and medical-device industries. The unit, which operates over 130 laboratories in more than 25 countries, provides services including quality control and product accreditation.

In addition, **John Hubbard** has confirmed his intention to step down as Bodycote's Chief Executive Officer when a successor is found. The search to select a person to execute the ongoing strategy is well advanced and the new CEO is expected to be announced shortly.

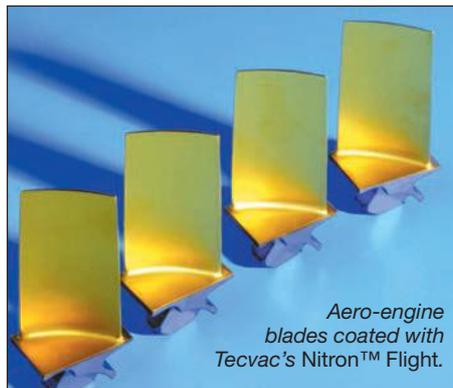
### 75% WEAR REDUCTION ON AEROSPACE ALLOYS

Tecvac's new *Nitron™ Flight* coatings, exhibited at the recent Farnborough International Air Show, have achieved dramatic reductions of erosion wear on high-performance alloy surfaces. Comparative wear tests, carried out by Tecvac, revealed that the coatings reduced abrasive wear by more than 75%.

With hardnesses of the order of 1800HV, *Nitron™* coatings can be applied to titanium, steel and advanced alloy surfaces at temperatures up to 700°C. They are imparted in a duplex process using physical vapour deposition (PVD) to apply hard thin-film coatings in a number of basic formulations, including titanium nitride (TiN), titanium carbonitride (TiCN) and a variety of other multiple layers.

Tecvac's PVD technology can apply graded coatings, precision engineered in thickness and composition, to critical flying parts such as aero-engine blades and other high-stress components. *The Nitron™ Flight* coatings, from 3 to 30

microns thick depending upon the application, can substantially reduce both wear and friction. This enables engine and airframe designers to reduce total-life costs, extend maintenance intervals, increase aircraft availability, reduce specific fuel consumption and, by allowing substitution of lighter-weight metals, reduce the use of expensive and costly alloys, while simultaneously increasing payloads.



Tecvac also featured the new *InnerArmor™* process, which provides a DLC (diamond-like carbon) coating on the internal surfaces of flying parts and aerospace engine components. DLC coatings can be applied to the internal surfaces of bores, tubes and hydraulic cylinders. This enhanced plasma coating process will impart DLC coating up to 50 microns thick on the internal surfaces of tubes and bores up to 3m in length. Inert and environmentally-friendly, the coating can reduce friction losses to very low levels and provide a very hard corrosion-resistant film.

Tecvac has already identified aerospace coating applications in control systems, fuel management and delivery and hydraulics systems. It expects to find many other internal applications, especially bores in engine sub-systems, where DLC coating has previously proved difficult or impossible to apply.

Heat treatment services were also shown at Farnborough by Tecvac and parent company Wallwork Heat Treatment Ltd, including plasma nitriding, low-pressure carburising, super-annealing, solution treatments and other aerospace-approved metallurgical services.

The two companies jointly hold accreditations to major manufacturers, including Rolls Royce, BAE Systems, Airbus, Hawker Beechcraft and Goodrich, as well as meeting *Nadcap* and AS 9000 standards.

### CARBON SAVINGS FOR CLAYTON

Clayton Holdings Group Ltd, which comprises CHTA members Clayton Thermal Processes Ltd (CTP) and Beta Heat

Treatment Ltd, has recently installed a new fluidised-bed cleaning furnace for the removal of polymer from contaminated machine parts. The furnace was purchased from Schwing Fluid Technik GmbH, the leading supplier of thermal cleaning systems for the plastics industry. In 2007, the group saw a dramatic increase in demand for its subcontract cleaning service from traditional customers, who require the removal of plastic from a variety of machine parts, including hot-runner manifolds, nozzles, screws, dies and filters, and also for the removal of resin-bonded cores from aluminium castings.

When a major international supplier of man-made fibres decided to subcontract the cleaning of filter packs from its production facility, it became evident that new equipment would be required. In order to meet this demand, it was decided to purchase the latest in fluidised-bed technology, an *Innovaclean 3648INB* furnace, the largest of its type so far manufactured.

The system comprises a fluidised-bed furnace, with usable dimensions 915mm diameter x 1220mm deep, with an integral afterburner to incinerate the waste gases produced, making it safe to exhaust them to atmosphere.

The company was already operating a fluidised bed with the same throughput capacity. However, because it has an external non-integrated afterburner, it occupies much more space and is less efficient. Both systems conform to the latest emission regulations, such that exhaust gases from the cleaning process are within the limits set out in the current environmental legislation: i.e. *Environmental Protection Act 1990 Part 1, for Metal Decontamination Processes, Process Guidance PG 2/9 (05)*.

The new unit will be used as a replacement for the existing system. Predicted savings in gas and electrical energy will reduce the carbon emissions at the Oldbury site in the West Midlands and qualified the company for an interest-free loan from The Carbon Trust to part-fund the £70,000+ investment.

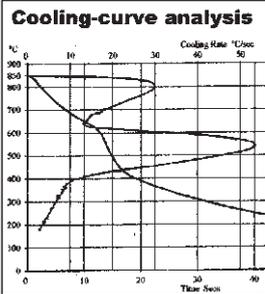
As well as offering a contract cleaning service, CTP are the UK agents for all Schwing thermal cleaning systems, including fluidised beds (*Innovaclean* and *Hydrotherm*), ovens (SSO), tool cleaners (*Compact Cleaner*) and vacuum pyrolysis systems (*Solvo*).

Beta are the largest fluidised-bed heat treatment company in Europe, offering a subcontract heat treatment service to all sections of industry, including aerospace, Formula 1, forging, extrusion and general engineering.

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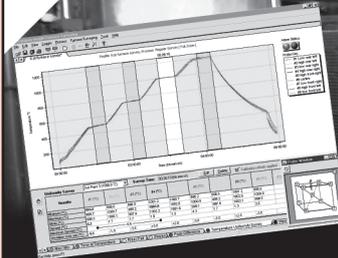
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## New Chairman for Subcommittee

CHTA recently appointed **Simeon Collins** of Wallwork Heat Treatment Ltd as Chairman of its Publicity Subcommittee.

Born in Oldham, where he still lives as a recently-married man, 37-year-old Simeon joined Wallwork in 1993 after obtaining an engineering degree. After working through the company's various departments, he has held the position of Sales Manager for the last four years, developing new markets and processes. At the same time, he has been undertaking an MBA.



Simeon Collins with Victoria, his wife of six months.

Simeon has been a regular attendee at Publicity Subcommittee meetings, and an occasional contributor to *Hotline*, for the last three years. Now, as chairman of the committee, he looks forward to the opportunity to broadcast CHTA's message while embracing new ideas and technologies to do so.

Having recently welcomed Kevin Bannister as a new member, CHTA's Publicity Subcommittee now comprises:

Chairman:

**Simeon Collins**, Wallwork Heat Treatment Ltd

Other members:

**Kevin Bannister**, Tamworth Heat Treatment Ltd

**Peter Cox**, Beta Heat Treatment Ltd

**John Craddock**, HHT (Midlands) Ltd

**Keith Hayward**, Controlled Heat Treatments Ltd

**John Jervis**, Bodycote Heat Treatments Ltd

**Ian Lacey**, Alloy Heat Treatment Ltd

**Keith Laing**, TTI Group Ltd

Secretary:

**Alan J. Hick**, Contract Heat Treatment Association

The Publicity Subcommittee is always looking to recruit new blood to help promote the case for contract heat treatment. CHTA members willing to volunteer a representative for the committee, which meets quarterly at SEA's Birmingham headquarters, should contact CHTA's Secretariat.

## Workheath Heat Treatment Ltd

New CHTA member Workheath Heat Treatment Ltd is based in Loughborough, Leicestershire. The company was formed in 1984, by David Shaw, with the aim of providing heat treatment for the automobile and engineering companies across the Midlands.

In 2003, TSP Flame Hardeners became part of Workheath. TSP was originally established in 1969 by Stan Peel and later managed by his son Dennis who still continues to work with the company. The customer base for TSP is countrywide with applications for defence, automobile, mining, transfer lines, jigs and fixtures as well as an array of gears, racks and sprockets.

Workheath also now also incorporates Procut International, specialists in the manufacture of ram-punch cutters for a variety of customers.

As well as flame and induction hardening, the ISO 9001/2000-certified company offers furnace case-hardening processes (carburising/nitriding), hardening, tempering, annealing, normalising and stress relieving, favouring salt-bath treatments



for minimal distortion.

Workheath recently moved from its original building into a new state-of-the-art facility, with up-to-date equipment to support its operations at all levels. The systems in place are in compliance with health and safety regulations and are geared towards maximum efficiency and quality.

Says Mohamad Mirza, Managing Director: "Workheath aims to be recognised as a robust and innovative company offering a high-quality service. We will continue to invest in technologies compatible with our corporate plans. Our strategic goals are growth, quality, well-trained and competent staff, and excellent resources, systems and processes."

## FORTHCOMING EVENTS

### Diary

**October 1 2008**  
**BIFCA Technical Series:**  
**BURNER TECHNOLOGY & SELECTION**  
 West Bromwich, England [www.bifca.org.uk](http://www.bifca.org.uk)

**October 1 2008**  
**INTRODUCTION TO HEAT TREATMENT**  
 Rotherham, England [www.namtec.co.uk](http://www.namtec.co.uk)

**October 6-9 2008**  
**NADCAP MEETING**  
 Yokohama, Japan  
[www.pri-network.org/Nadcap/Nadcap-Meeting-Information-\(Logistics-Minutes-Agendas\).id.334.htm](http://www.pri-network.org/Nadcap/Nadcap-Meeting-Information-(Logistics-Minutes-Agendas).id.334.htm)

**October 7-8 2008**  
**HEAT TREATMENT FOR HEAT TREATMENT PROFESSIONALS**  
 Rotherham, England [www.namtec.co.uk](http://www.namtec.co.uk)

**October 8-10 2008**  
**64TH HÄRTEREI-KOLLOQUIUM**  
 Wiesbaden, Germany  
 German-language heat treatment conference and exhibition: [www.awt-online.org](http://www.awt-online.org)

**October 13-15 2008**  
**ALUMINIUM PROCESS FURNACE SEMINAR**  
 Meadville, PA, USA  
[www.secowarwick.com/seminar/seminar.html](http://www.secowarwick.com/seminar/seminar.html)

**October 14-16 2008**  
**UNDERSTANDING HEAT TREATMENT**  
 Birmingham, England  
 73rd repeat of Wolfson's well-established course. Details from Derek Close, Wolfson Heat Treatment Centre, Federation House, 10 Vyse Street, Birmingham B18 6LT (tel: 0121 237 1122; fax: 0121 237 1124; e-mail: [derek.close@sea.org.uk](mailto:derek.close@sea.org.uk); [www.sea.org.uk/whct](http://www.sea.org.uk/whct))

**October 20-21 2008**  
**FURNACES NORTH AMERICA 2008**  
 Nashville, Tennessee, USA  
 The Metal Treating Institute's conference and exposition: [www.heatreatmentonline.com/fna2008/](http://www.heatreatmentonline.com/fna2008/)

**October 24 2008**  
**SEA AWARDS**  
 London, England [www.sea.org.uk](http://www.sea.org.uk)

**October 27-30 2008**  
**17TH IFHTSE CONGRESS**  
 Kobe, Japan [www.ifhtse2008.org](http://www.ifhtse2008.org)

**October 29-30 2008**  
**CLEANING REQUIREMENTS FOR HEAT TREATMENT: DEVELOPMENTS AND APPLICATIONS**  
 Worcester, Massachusetts, USA  
[www.asminternational.org/htcleaning08/](http://www.asminternational.org/htcleaning08/)

**November 6 2008**  
**CHTA PUBLICITY SUBCOMMITTEE**  
 Birmingham, England

**November 11-13 2008**  
**HEAT TREATMENT 2008**  
 Moscow, Russia  
[www.mirexpo.ru/eng/exhibitions/heat\\_treat08.shtml](http://www.mirexpo.ru/eng/exhibitions/heat_treat08.shtml)

**November 13 2008**  
**CHTA MANAGEMENT COMMITTEE**  
 Birmingham, England

**November 18-19 2008**  
**BIFCA Technical Series: ENERGY-EFFICIENT DESIGN & OPERATION OF INDUSTRIAL FURNACES**  
 West Bromwich, England [www.bifca.org.uk](http://www.bifca.org.uk)

**November 20 2008**  
**BIFCA Technical Series: IMPROVING FURNACE OPERATION AND DESIGN THROUGH THE USE OF THERMAL MODELLING**  
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## Super Systems UK

Hotline's new advertiser introduces the new-generation 9205 versatile programmable atmosphere controller, one of its many control systems supplied specifically for the heat treater.

Super Systems UK Ltd is the European subsidiary of Super Systems Inc (SSI) of Cincinnati, USA. Our Midlands-based team installs and supports furnace control systems manufactured and designed by SSI's fifty-plus workforce and software teams.

SSI emphasis is on making sophisticated controllers that are as simple as possible to use. The industry has seen modern instruments develop to the point where they can be too complicated for furnace operators to utilise fully without a plant "specialist" being available, or having the manual to hand.

SSI only manufactures equipment for heat treatment applications; so only features useful to our industry are designed in. You won't find food and plastics industry references in an SSI instrument.

### New-generation 9205 atmosphere controller

As well as having recently introduced a range of temperature-survey recorders and video chart recorders, the company has been busy enhancing its 9205 atmosphere controller. The 9205 is SSI's versatile programmable atmosphere controller used to address many thermal processing applications where temperature, carbon-potential and quench control, along with event I/O management, are necessary.

The new-generation 9205 recipe programmer includes 24 independent steps per recipe, with additional operational codes (opcodes based on the Marathon principle) to enable better process control. The 9205 also supports multiple-user interface screens for added flexibility. Screen sizes include 3.5" (89mm), 5.7" (145mm) and 12.1" (307mm). Functionality added to the screens includes "stylus" notes entry, user-defined data points and trend charts for paperless chart recording, zoom and pan touchscreen control on the charting screen, and remote data retrieval through Ethernet.

SSI has also included an on-line carbon



# Market Movements

ANALYSIS OF QUESTIONNAIRE REPLIES RELATING TO 33 CHTA MEMBER SITES

"THIS QUARTER" =

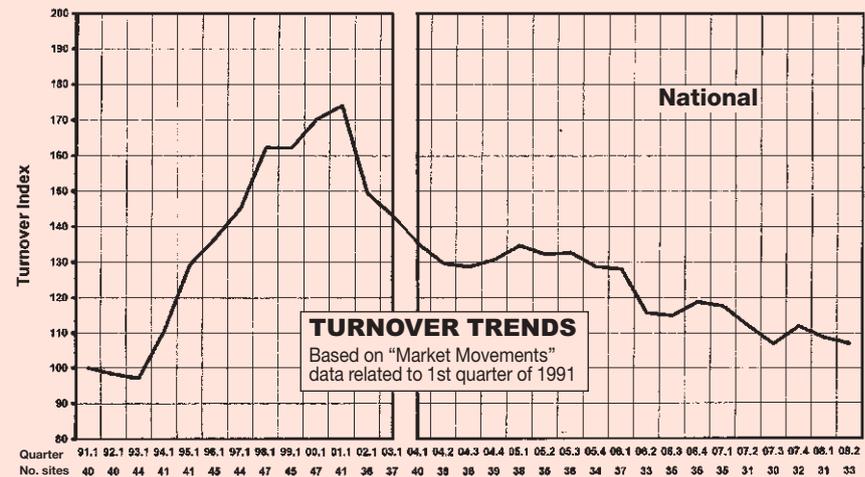
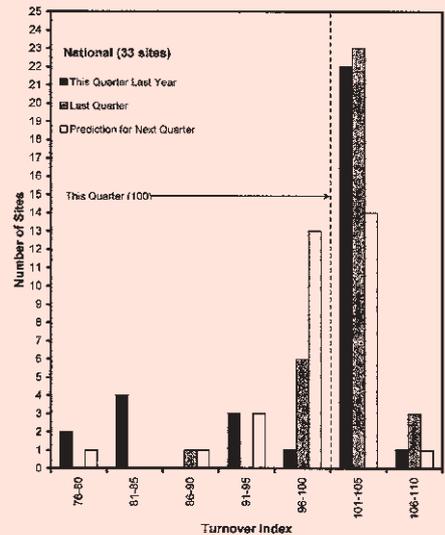
**1 APRIL –  
30 JUNE  
2008**

= **TURNOVER INDEX 100**

## National

OVERALL ANALYSIS  
(33 SITES)

	Mean index
This quarter last year	<b>99.2</b>
Last quarter	<b>101.6</b>
Predicted next quarter	<b>99.0</b>



diffusion modelling program in the specification. The *CarbCALCII* carbon simulation program, used as the simulation engine, predicts the carbon transfer between atmosphere and steel surface and its diffusion within the steel.

The 9205 will display a carbon profile in real time, using data systemically retrieved in real time. In control mode, a desired carbon profile is entered and the controller will update the necessary control parameters to meet the required specification.

The 9205 now also has a load-tracking module. Operators can enter load information directly into the controller touchscreen. This provides historical records that can be viewed remotely from a computer or from the controller touchscreen.

The remote data management will provide the user quick easy access to historical loads, with a loading report which includes entered load information and process trend data. In conjunction with the carbon

diffusion program, the load tracking will also provide operators with the ability to view the carburising process and replay the load.

Along with these advanced features, the instrument remains true to SSI's ideals of simplicity of operation and short training times for new operators.

### STATESIDE STATS

#### NORTH-AMERICAN HEAT TREAT SALES UP IN FIRST HALF YEAR

Participating members in the Metal Treating Institute's Monthly Sales Statistics Program reported sales of \$450.8million at the end of the first half of 2008, outpacing 2007 sales of \$432.9million for the same period by 4.1%. June billings grew 4.2%, from \$72.0million in 2007 to \$75.0million in 2008.

The latest figures for July 2008 indicate billings of \$72.5million, up 9.6% over the same month in 2007.