

## Inside . . .

	Page
• Achieving CQI-9 – was it worth it?	3
• Outsourcing heat treatment	5
• CHTA's website – what do you think?	6
• CCAs – latest news	7
• Obituary: Brenda Buckley	7
• Training	7
• Member news	8
• SEA Award for CHTA member	9
• Diary	10
• Member profile	12
• Market Movements	12

## CHTA Secretariat

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

**Contract Heat Treatment Association**  
c/o SEA, BJGF Federation,  
Federation House, 10 Vyse Street,  
Birmingham B18 6LT  
Tel: 0121 329 2970 (or 0121 237 1123)  
Fax: 0121 237 1124  
E-mail: mail@chta.co.uk  
Website: [www.chta.co.uk](http://www.chta.co.uk)

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

The Contract Heat Treatment Association is not responsible for the statements made or opinions expressed by contributors to *Hotline*.



CHTA is affiliated to the Surface Engineering Association

# Countering the recession

*CHTA Publicity Subcommittee Chairman Simeon Collins (Wallwork Heat Treatment Ltd) sees positive opportunities in the current downturn.*

It seems that, no matter where we turn these days, all we see and hear in the media are the clanging bells of doom. Indeed there is strong reasoning behind such reporting; banks, retail, airlines, car sales and manufacturing are but a few sectors that are suffering, all of which affect us and our customers.

Added to this is the pressure of disproportional cost increases such as those for gas, electricity and service gases. With no immediate end to this situation in sight, we must ask ourselves if there is a way we can use the current business climate to our advantage.

It is true that our individual market shares are decreasing as the overall customer pool shrinks. With this in mind, it has never been more important for the subcontract heat treatment sector to be prevalent in the minds of the in-house heat treaters.

### Developing outsourcing

I have always been a supporter of developing partnerships with such businesses and, over the past few years, we have highlighted the many benefits of outsourcing for in-house heat treaters through *Hotline* and elsewhere (see page 5). The question to be asked is whether we have followed this up as a major objective in our business plans.

Rising costs and shrinking markets are encouraging businesses to reduce overheads and 'right-sizing' has never been more at the forefront of company decision-making. Now may well be the opportune time for us to work with these companies, offering heat treatment

**"...we must ask ourselves if there is a way we can use the current business climate to our advantage."**

processes helping us to increase business, or replace lost business, at prices that truly reflect the value of the work we undertake as subcontractors.

The in-house heat treater must of course remain in business following such a change in order to benefit. Recent discussions I have had, on a similar project, illustrated that the decision to outsource not only proved to be the single most effective way of reducing costs for the business. It also brought with it the added value of increased quality with a reduction in re-work and scrap. Ultimately turnaround times were improved, following the outsourcing, and the customer emerged stronger and better-placed to deal with the uncertainty ahead.

### Opportunities

This is just one example of a success story. The enquiry level in this area has increased significantly in the last six months; I believe it will continue to be a growth area in the future. I urge the Association and its members to consider ways to take advantage of the current pressures with appropriate focused aims and objectives.

It is impossible to determine the length and depth of this downturn but I am personally a "glass-half-full" man. I believe that, with a positive attitude, a keen eye for business opportunities and well-thought-out ideas, we can emerge from this with stronger businesses and with it a stronger Contract Heat Treatment Association.

## Ask the Expert

**Q** How can I reduce the cost of my sintering process without compromising quality or reliability?

**A** Through the introduction of nitrogen-based atmospheres which have been successfully proven for a wide range of heat treatment processes over many years. To find out more, visit our website.

### tell me more

[www.airproducts.co.uk/metals](http://www.airproducts.co.uk/metals) Tel: +44 (0)1270 614 314; E-mail: [apbulkuk@airproducts.com](mailto:apbulkuk@airproducts.com)

Air Products are sponsors of *Hotline*



**Guido Plicht**  
Head of Metals  
Processing Applications  
Technology

EUROTHERM®

# Heat Treatment

LEADING THE WAY IN RELIABLE SOLUTIONS



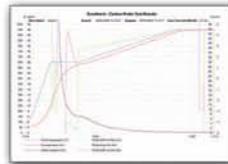
## Heat Treatment Control Solutions

- Furnace Temperature/Carbon Controllers
- Paperless Chart Solutions (Aerodaq)
- Oil Quench System Controllers
- Overtemperature Systems
- Furnace I/O Control



## Automated Reporting Solutions

- Automated TUS Reporting to AMS2750D
- From .uhh file in Review
- From Eycon or 6000 Series recorders



## Carbon Control

- New EC Probe
- Probe Diagnostics
- Low Sooting open design
- N type t/c available



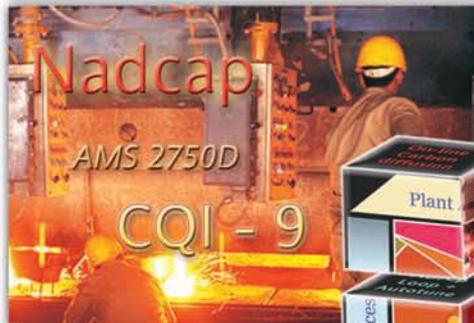
## Online Carbon diffusion: 3 Gas IR

- Online Carbon Diffusion
- Real time case depth modelling
- Optimises cycle times
- 3 Gas IR for Optimum Quality



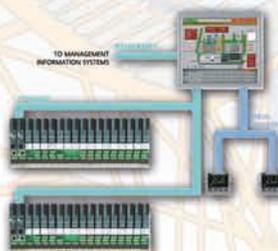
## Nitriding Control Solutions

- Auto-Nitriding Control
- Nitride Potential
- NH3 Dissociation
- Low cost system



## Integrated Solutions

- Adaptable, Extendable Integrated Solution (Batch, Atmosphere, Vacuum etc.)
- Furnace Full Control (no PLC, no separate Carbon/Oil/Temperature Controllers)
- Digital Furnace Mimic
- Paperless Furnace Data Management (no additional chart recorder requirement)



[www.eurotherm-heatreatment.com](http://www.eurotherm-heatreatment.com)

*Eurotherm, with its wide range of products and application expertise, provides the building blocks for solutions for the Heat Treatment Industry*

**Eurotherm Limited**  
 Faraday Close Durrington  
 Worthing BN13 3PL  
 United Kingdom  
 T +44 (0)1903 268500  
 F +44 (0)1903 695666  
 info.uk@eurotherm.com  
 www.eurotherm.co.uk

# Achieving CQI-9 - was it worth it?

CHTA member Heat Treatment 2000 Ltd recently gained approval to the CQI-9 quality-assurance system for heat treatment of automotive parts, the requirements of which were examined in *Hotline 107* (March 2007). **John Piggott** of Partners in Change Ltd, who provided consultancy support, outlines key aspects of the implementation process and records the benefits as assessed by the company.

## Achieving CQI-9

In July 2008, Heat Treatment 2000 (HT2000) met the full requirements of CQI-9 and gained external accreditation. This was achieved by carrying out a detailed gap analysis and implementing the necessary changes. The gap analysis highlighted the following:

A. The basic quality management system, which met ISO 9001 and TS 16949, needed only a few modifications to incorporate the system requirements of CQI-9.

B. The detailed review of the CQI-9 tables, which specify test requirements and frequency, highlighted several areas that needed further improvement. The following are some examples:

- Increasing the frequency of: temperature uniformity surveys, microstructure examinations, calibration of thermocouples, surface hardness checks (every two hours), etc.
- Additional alarms were fitted to ensure that equipment was monitored continuously to meet the prescribed limits of CQI-9.
- Installation of infrared pyrometry to confirm correct part temperature before continuous-furnace quenching (see *photograph*).
- The Spec View computer system was upgraded to cover the additional alarms and infrared camera.

The implementation of CQI-9 involved a



Adrian Ordidge, HT2000's Technical Director.

considerable amount of senior management time and money. HT2000's Managing Director Paul Handley said: "The cost associated with equipment modifications and the implementation process was in excess of £30,000, and this does not cover the costs for the additional on-going checks which are required".

## Was it worth it?

The answer to this question comes from comments made by HT2000 directors. Paul Barber (Operations & Commercial Director) stated:

- "Part of our strategic development was to gain approval to CQI-9 to continue to support existing automotive business and new automotive projects. Instructions from vehicle manufacturers who are AIAG members state that all heat treat processes throughout the supply chain should be assessed to CQI-9.



The infrared pyrometer at the discharge end of HT2000's continuous hardening furnace.

- Customers recognise the pressure on manufacturing and sub-suppliers and, at a time when most people have cut back on expenditure, at HT2000 we have continued to invest for the future. As a result of meeting the requirements of CQI-9, we have obtained orders for new products, as well as increasing our share from some established customers.
- I look upon it as *Risk Protection*. We only need one part, used in a safety-critical area, to fail in service, and we would be liable for rectification and recall costs and loss of creditability. This alone makes the investment in achieving and maintaining CQI-9 worthwhile.
- The use of a consultant considerably helped in the effective and efficient integration of CQI-9 into our quality management system."

John Walsh (Quality Director) and Adrian Ordidge (Technical Director) have indicated:



HT2000 directors Paul Handley and Paul Barber (right) with the CQI-9 certificate.

- "Though it has increased our workload, it has added to our process controls, increasing customer confidence.
- Customers have expressed very positive comments about HT2000 for gaining external certification in such a short time frame.
- Accreditation has not only increased customer confidence but also removed the need to be individually audited."

The main concern HT2000 have about CQI-9 is that, although some of the vehicle manufacturers, and certain key major suppliers, have incorporated it as a requirement into their supplier manuals etc, it has not been universally applied throughout their supply chain and non-approved sources are still being used.

It is recognised the automotive sector is currently in difficulty, but meeting the CQI-9 requirements enables Heat Treatment 2000 to compete for any new work that is available and be ready for the upturn when it arrives.

## Information

For further information, please contact:

- John Walsh at Heat Treatment 2000 Ltd (e-mail: [john.walsh@heattreat2000.co.uk](mailto:john.walsh@heattreat2000.co.uk); tel: 0121 526 2000; [www.heattreat2000.co.uk](http://www.heattreat2000.co.uk)).
- John Piggott at Partners in Change Ltd (e-mail: [j.piggott@partnersinchange.com](mailto:j.piggott@partnersinchange.com); tel: 01234 344 070).

In order to obtain a copy of CQI-9, go to: [www.aiag.org](http://www.aiag.org).

**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.



Atmosphere Furnaces



Installation Technology



Vacuum Furnaces



multi-cell®

## Total Solutions from one Source

- modular atmosphere and vacuum furnaces
- atmosphere and vacuum installation
- other processes: sintering, plasma, brazing, AvaC®
- measurement, regulation and control technology
- automation and control technology
- development of expert systems
- repair and refurbishment



**IPSEN ABAR UK LTD** · Unit 1A · Nechells Business Centre  
 31 Dollman Street · Nechells · Birmingham B7 4RP  
 Phone: 0121 / 3 59 59 - 59 · Fax: 0121 / 3 59 59 - 95  
 E-mail: sales@ipsenabaruk.com · [www.ipsen-international.com](http://www.ipsen-international.com)

## HEAT TREATMENT SERVICES

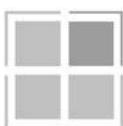
**ALMOR** offer Heat Treaters a full range of furnace services and own-make replacement parts.

**Our capabilities include:**

- ATMOSPHERE CONTROLS
- FURNACE UPGRADES AND ENERGY-SAVING BURNERS
- REPLACEMENT PARTS AND CONSUMABLES
- NEW FURNACES AND OVENS INCLUDING INSTALLATIONS FROM AICHELIN
- SITE SERVICES, MAINTENANCE CONTRACTS, TRAINING AND PLANT ASSESSMENTS

**Own-make products include:**

- "EUROSENSOR" OXYGEN PROBE
- "GASPRO", OUR PORTABLE 3-GAS ANALYSER (CO/CO<sub>2</sub>/CH<sub>4</sub>)
- NITRIDING CONTROLS
- "ENDOCUBE" CATALYST
- CHAINS AND FANS
- GENERATOR RETORTS AND RADIANT TUBES
- ELECTRIC ELEMENTS
- "NOXMAT" RECUPERATIVE BURNERS FOR DIRECT HEATING AND WITH RADIANT TUBES



**Almorgroup**

For more information visit: [www.almor.co.uk](http://www.almor.co.uk)  
 Tel: +44 (0)115 986 8773 Fax: +44 (0)115 986 6716  
 Email: sales@almor.co.uk

A PARTNER OF  
**AICHELIN**  
[www.aichelin.com](http://www.aichelin.com)

## Heat resistant castings Jigs, Fixtures, Furnace Furniture

Our specialist service for nickel chrome castings is based on over 40 years experience of the heat treatment business.

*Our services include:*

- Design**
- Pattern making**
- Reverse engineering**
- Benchmark quality**
- Competitive prices**
- Unbeatable delivery times**



[www.wallworkcastalloys.com](http://www.wallworkcastalloys.com)



Wallwork Cast Alloys  
 Tel 0161 797 9111

**PROFIT FROM OUR  
 EXPERIENCE**

# Outsourcing heat treatment

The annual listing of CHTA members in the September/October 2008 edition of Furnaces International is introduced by the following article by CHTA Secretary Alan J. Hick.

Unremitting global market pressures and ever-increasing energy costs are driving more UK manufacturers of metal products to reassess the virtues of outsourcing heat treatment processing, instead of conducting this crucial step of the manufacturing cycle "in-house".

The benefits of outsourcing heat treatment are many. In utilising the wide range of specialist services of a subcontract sector that must optimise energy efficiency and employ latest technology in order to remain competitive, the manufacturer can:

- release valuable works space for more core activity;
- reduce capital plant requirements and eliminate associated maintenance costs;
- avoid the cost of providing/training labour and the highly-skilled supervision needed to manage today's sophisticated treatments;
- tap into a wealth of metallurgical expertise, otherwise a diminishing resource within engineering industry as a whole;
- achieve greater flexibility in benefiting from the best treatments;
- access new processes and procedures immediately they are available, without capital cost;
- eliminate the expense and time consumed in meeting today's stringent quality-assurance and environmental demands in-house.

Any realistic assessment of in-house processing costs, which takes account of all the factors involved, will show that outsourcing heat treatment offers the most cost-effective option in all but a minority of special situations.

Representing the majority of the UK subcontractors in this field, the Contract Heat Treatment Association (CHTA) provides a website, at [www.chta.co.uk](http://www.chta.co.uk), to assist manufacturers in making the most of the benefits. The updated list of members here is taken from that comprehensive source.

## Quality Assurance

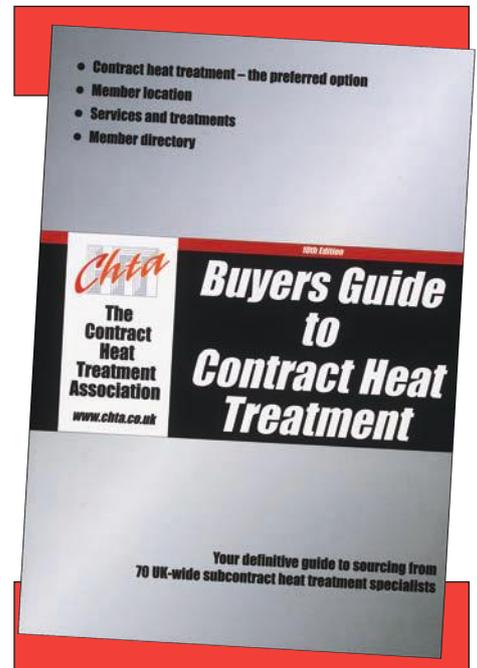
All companies listed are members of the CHTA and, as such, are pledged to maintain the highest standards of quality and service. ISO 9001:2000 is currently the universally-accepted quality accreditation, but many members hold additional quality approvals from major organisations, which are especially relevant in particular market sectors.

## www.chta.co.uk

CHTA's website features a number of helpful facilities for engineering companies looking to outsource:

- Activate the "Buyers Guide" page to find speedily, from a constantly-updated database, the companies offering services to match specific heat treatment requirements. See details of the companies selected and submit enquiries to one or more with a single click.
- View CHTA's quarterly newsletter, updating on latest developments, by clicking on "Hotline". (Contact CHTA's Secretariat to receive a regular hard copy).
- Click on "Specifying Heat Treatment" to access CHTA's series of *Datasheets for Non-heat-treaters*, aimed at aiding sensible specification of subcontract heat treatment processing and avoidance of common problems. Couched in layman's terms, they answer the questions: What are the treatments? What are the benefits? What materials can be treated? What are the limitations? What problems could arise? How do I specify? Where do I go?

In response to the last question, the datasheets recommend contact with appropriate CHTA member companies from those listed here.



## Free hard-copy Buyers Guide

Dubbed "the definitive guide to sourcing from seventy UK-wide subcontract heat treatment specialists", the eight-page *Buyers Guide to Contract Heat Treatment* (10th edition) features a detailed central table cross-referencing CHTA members to any of 44 processes carried out and 16 classes of material treated. A member directory lists full contact details while a map shows general locations.

For a free copy of the guide, contact Nasima Khatun at the Contract Heat Treatment Association, c/o SEA, BJGF Federation, Federation House, 10 Vyse Street, Birmingham B18 6LT (tel: 0121 237 1123; fax: 0121 237 1124; e-mail: [nasima.khatun@sea.org.uk](mailto:nasima.khatun@sea.org.uk)).

**For the best in subcontract heat treatment services, go to . . .**

**www.chta.co.uk**

**. . . your guide to sourcing from some 70 UK-wide heat treatment specialists**



**The Contract Heat Treatment Association**

# CHTA's website: what do you think?

CHTA's website, [www.chta.co.uk](http://www.chta.co.uk), has operated in its present format ever since it was introduced some eight years ago. Now, in conjunction with our webmasters Sitemakers Ltd, CHTA's Publicity Subcommittee is considering ways in which the site might be upgraded and attract more visitors, whilst maintaining its outstanding search-engine performance. The objective is to enhance functionality and add to proven existing features, such as the much-praised Buyers Guide database, which is constantly updated (when members notify us of changes!), and the extremely-valuable down-loadable series of *Datasheets for Non-heat-treaters* (which could be more obviously sign-posted). A number of potential additions are currently being assessed:

- Whilst down-loadable editions of *Hotline* (numbers 87 to current) can be found on the site, they are not scanned by search engines in their PDF form. It is proposed that the home page could feature regularly-changed "live" key articles from *Hotline* (or other sources) in abstract form, linked to the full archived articles elsewhere on the site. This would substantially broaden the range of keywords via which visitors land on [www.chta.co.uk](http://www.chta.co.uk).
- The site would also become more dynamic if it were to feature an open "Ask-the-Experts" page or, to avoid possible ramifications of appearing to be consultants, an "Ask-the-Members" page. With appropriate riders, questions posed by visitors could be e-mailed directly to all CHTA members who could

respond and follow up (or ignore) matters raised.

- A search for approvals held by members could be incorporated as a separate page/database (as opposed to inclusion in the current Buyers Guide database, which could be problematical). Here members would have to decide if they wished to quote all accreditations (including specific company approvals) or restrict their information to national approvals.

Comments on these proposals from CHTA members (and other readers who use the site) would be welcomed by your Secretariat, as would any other suggestions to reinforce the website's main purpose – to assist engineering industry in making best use of the services and expertise available from CHTA members.

**AIR PRODUCTS TO CONTINUE SPONSORSHIP**

CHTA is delighted to announce that Air Products plc will again be sponsoring both the Association's website and *Hotline* in 2009. Air Products have kindly supported all editions of this newsletter since March 1999 (issue 75). Their sponsorship of [www.chta.co.uk](http://www.chta.co.uk) began when the website was launched eight years ago.

**CHTA MEMBERSHIP FEES**

2009 CHTA membership fees, being invoiced via BJGFF, remain at the same level as in 2008.

## Climate Change Agreements – latest news

SEA's **Dave Elliott** announces some success in reducing the impact of Defra's previously-reported CCA target review for the heat treatment sector.

Following lengthy and protracted discussions and the amassing of great quantities of data, we have finally agreed the target review figures with Defra. The review will change your targets for Milestone 5, 2010.

You may recall my letter and e-mail,

regarding the target review. These were sent to all sites participating in our agreement and to all consultants representing companies in our sector. The letter and e-mail stressed the importance of companies taking part in the target review process and supplying all necessary data to challenge Defra's default position of a target tightening of 10.1%.

Just over 50% of the companies in our agreement responded to my requests. They supplied sufficient information and data to enable a comprehensive overview of the remaining potential for further energy savings to be discussed with Defra on an individual basis.

Unfortunately, for those companies that did not supply any information and data, it

was extremely difficult to oppose Defra's default position with any great certainty.

However we did manage to get Defra to reduce its default position to 7.1%. Defra will be contacting all sites shortly to advise them of their new targets for Milestone 5, 2010.

Milestone 4 ended on 30th September 2008. CCA participants should now have reported final figures to me so that the sector information can be assembled and forwarded to Defra at the earliest possibility.

Sites that have not met their targets will need to consider whether they wish to enter into the emissions trading market to make up for any shortfall in their performance and thereby guarantee their participation for a further two years.

## OBITUARY

### Brenda Buckley

*CHTA is sad to report the passing of our only-ever lady Chairman, Brenda Buckley. She died on 3rd November at the age of 83.*

Brenda rendered much-valued service on CHTA's Management Committee for twelve of our formative years (1974-86) and took on the role of the Association's Chairman in 1984-85.

She always put the wellbeing of our sector to the fore, observing in her address to 1984's AGM: "The reputation of the contract heat treatment industry must continue to be that of a progressive,

technically qualified and equipped industry offering high quality and service to the engineering manufacturers".

Educated at Princess Mary High School in Halifax, Brenda went on to study metallurgy at the University of Leeds before entering the family business, Holt Brothers (Halifax) Ltd. She eventually progressed to become Managing Director of Holt Brothers and of Flame Hardeners Ltd, positions from which she retired in 1992.

Outside work, Brenda took a keen and active interest in both the local church, being Secretary of Park Congregation Church, and musical activities. She was the principal cellist for the Halifax Symphony Orchestra for many years. The orchestra dedicated its most recent concert, on 23rd November, to Brenda.



*Brenda Buckley, sitting alongside CHTA's first Chairman John Cowie, at the Association's 25th Anniversary event in 1998. Standing behind are other former CHTA chairmen Doug Goldstraw, David Wilkins and Ian Brown.*

## TRAINING

### Excellent CHTA support for Wolfson course

Wolfson Heat Treatment Centre's 73rd *Understanding Heat Treatment* three-day course in October was well attended, with 28 delegates from across the UK. CHTA member companies again supported this important contribution to our industry's wellbeing, represented by 39% of the participants (*pictured here*).

Now an annual event, *Understanding Heat Treatment* will next take place on 20-22 October 2009, again at SEA's Birmingham headquarters. For details, contact Derek Close, Wolfson Heat Treatment Centre, Federation House, 10 Vyse Street, Birmingham B18 6LT (tel: 0121 237 1122; e-mail: [derek.close@sea.org.uk](mailto:derek.close@sea.org.uk); fax: 0121 237 1124; [www.sea.org.uk/whtc](http://www.sea.org.uk/whtc)).



*Standing (l. to r.): Alan Henry (Keighley Laboratories), Paul Price and Kerry Smith (both Bodycote Heat Treatments), Ashley Payne (Keighley Laboratories). Seated: Ben Clewes (TTI), course chairman Derek Close (Wolfson Heat Treatment Centre) and fellow course speaker Terry Atterbury (TTI).*



*Standing (l. to r.): Paul Edwards (Tecvac), Chris Stretton (Wallwork Heat Treatment), James Menzies (Keighley Laboratories) and Andrew Gerrard (Wallwork). Seated: Kevin Langston (Tamworth Heat Treatment), course speaker Alan J Hick (Contract Heat Treatment Association) and Sean Coles (TTI Group).*

## Member news

### NEW MD FOR KEIGHLEY

Debbie Mellor formally took over from Peter Hewitt as Managing Director of Keighley Laboratories Ltd in September.

Debbie has been with the company since 1986, originally starting in the accounts department as a junior, progressing to Company Secretary in 1997. She was appointed as a Director when Peter Hewitt was taken ill last year, and has been Acting Managing Director since September 2007. Peter has improved greatly and will continue to be involved as a non-executive Chairman.

Says Debbie: "I hope that the transition has been seamless. I have a very competent management team, who have supported me tremendously". She reports that the company has a number of investment programmes planned for the next 12 months, and will continue to offer the expertise and service to which customers have become accustomed.



Stephen Harris

Debbie Mellor

### BODYCOTE APPOINTS CHIEF EXECUTIVE

Bodycote Plc has appointed Stephen Harris as Chief Executive. He initially joined the Board as Chief Executive Designate on 1 November 2008 and takes over from John Hubbard in the first quarter of 2009.

Stephen, 50, was previously a main board Executive Director at Spectris plc, responsible for the operational supervision of a number of the group's trading companies. He is also a Non-Executive Director of Brixton Plc. His past roles include seven years as Divisional CEO and main board director of Powell Duffryn plc. Before that, he was resident for twelve years in the USA, where he held several senior positions within APV plc.

Stephen has an Engineering degree from Cambridge University and an MBA from the University of Chicago, Graduate School of Business. He is a Chartered

Engineer, a member of the Institute of Measurement and Control, and a member of the Institution of Engineering and Technology.

A keen skier and scuba enthusiast, Stephen was also an accomplished oarsman, winning medals at the Royal Canadian Henley Regatta, the US Open Rowing Championship and the Empire State Games.

Stephen has a strong track record of improving financial and operational performance in multinational businesses, ideally equipping him to lead Bodycote as it enters a new period in its strategic development. Following the disposal of the testing business, Stephen will concentrate on enhancing the performance of Bodycote's core business, thermal processing, enabling it to deliver its full potential.

Bodycote expects to accelerate the improvement in the financial performance of the thermal processing business by: increasing the amount of high-added-value and speciality processes it offers; further expanding in emerging markets; and restructuring underperforming facilities.

Alan Thomson, Chairman, says: "We are delighted to welcome Stephen Harris to Bodycote. I look forward to working closely with him as we take Bodycote forward in this new phase of its development. Stephen has an impressive track record. His management experience and achievements will be invaluable to Bodycote as the company focuses on its global network of thermal processing services."

### MELTHAM MILLS TO PURCHASE BORG WARNER HEAT TREATMENT CAPACITY IN OUTSOURCING AGREEMENT

Following negotiations, Yorkshire-based Meltham Mills Heat Treatment and Borg Warner have agreed a supply agreement and the sale of the Port Talbot sealed-quench carburising plant for shaft processing.

The furnaces and associated equipment are being moved in three stages from South Wales to Yorkshire by Almor Engineering so that Borg Warner have a seamless transition and there is always back-up capacity available on hand.

Meltham made the decision to go ahead, in full knowledge of forecast market conditions in 2009, because of the potential it brings to the company in a field where capacity has been a constraint on growth. The installation of the three furnaces will be completed by early 2009. Their physical capacities are larger than Meltham's existing furnaces and total capacity will grow by almost 150%. The existing plant will become focussed on bespoke work

while volume work is transferred to the new furnaces.

After accounting for the percentage dedicated to Borg Warner's requirements, the new furnaces will bring significant extra tonnage to Meltham's sealed-quench capacity. Some of this capacity is already allocated to current projects, but Meltham will be able to offer extra processing capacity by spring next year.

Meltham believe that the key to bidding successfully for outsourced work is to provide the customer with the confidence that their requirements are fully understood and within the bidder's capabilities. In this case, by taking over the equipment as well, additional security is gained as the plant's performance and capabilities are already proven for the processes.

### NEW FURNACE FOR KEPSTON

A new hydrogen-atmosphere humpback furnace has allowed Wednesbury-based Kepston Ltd to furnace braze or bright anneal larger components than previously.



Kepston's new hydrogen-atmosphere humpback furnace.

Their original humpback continuous furnace, purchased eleven years ago, had a belt width of 300mm and a working height measuring about 150mm. The new one, which came on line in July, features a belt width of 450mm and a working height of some 175mm. It is capable of brazing stainless steel assemblies with either nickel- or copper-based brazing alloys and is also ideal for bright annealing austenitic stainless steels and bright hardening certain grades of martensitic stainless steel.

In order to accommodate the new furnace, Kepston needed to move all of their hydrogen-atmosphere batch furnaces; this required the building of a new extension. The total cost of the project was over £300,000.

A date for your diary...

## CHTA AGM

CHTA's 31st Annual General Meeting will take place in Birmingham on May 21st 2009. Full details will be circulated to members in April.

## CHTA member wins SEA Quality Award

Congratulations to Meltham Mills Engineering (now Meltham Mills Heat Treatment Ltd) on becoming the first CHTA member to win one of the Surface Engineering Association's biennial awards. Presented recently at the House of Lords, the 2008 SEA Quality Award was for Meltham's part in improving quality and delivery performance in the global automotive supply chain of high-performance synchromesh rings.

Meltham Mills Engineering was approached in 2007 by Formflo Ltd, who manufacture steel synchromesh rings for leading gearbox makers around the world. Formflo needed additional capacity for their sub-contract carburising and press quenching. Formflo's rings ensure that gear changes are smooth and quick, whether powering around the track in a Nissan GTR Skyline, pulling a 4x4 and trailer over some of the world's worst roads or delivering goods in the ubiquitous "white van" in cities everywhere.

The expertise within the group permitted



Presentation of the SEA Quality Award at the House of Lords event on October 24th: (l. to r.) Paul Griffiths of Schloetter Co Ltd (sponsor), winner Peter Fletcher of Meltham Mills Engineering Ltd, host Lord Hoyle (Honorary President of SEA) and compere Linda Evans (SEA Deputy Chairman).

the production of a more consistent product with significantly lower levels of rejects. Meltham were able to measure synchro rings to the same accuracy throughout the process (a few thousands of an inch in three dimensions and across multiple faces) as Formflo. Both companies used the latest CNC co-ordinate measuring machines, in conjunction with traditional metrology and metallurgy, allowing the rapid interchange of information and correlation of data for

prototyping and for production control.

With the growth in volumes associated with this work, Meltham have invested in new capacity for press quenching the rings and envisage that, while 2009 will be below original plans, the growth in new parts from Formflo will compensate for reduced volumes of current parts.

In the medium term, it is expected that fully heat-treated synchromesh rings will become an increasingly common method of supply for gearbox manufacturers.

## ADVERTISEMENT



# SuperSystems UK

[www.supersystemsuk.co.uk](http://www.supersystemsuk.co.uk)



sensors

Highly precise, ultra reliable oxygen & carbon probes: "S", "R", "K", & "N" Thermocouples with full rebuild, test and recertification services.

CeraGold Probes for harsh atmospheres  
SuperOX probes for very high temperatures.



atmosphere

Simple yet sophisticated 9205 carbon, temperature and quench programmer. Best value endothermic generator control. Portable and fixed 3-gas and dewpoint analysers. Cost effective range of paperless video chart recorders.



gas nitriding

A range of solutions, using robust and stable sensor technology. From simple DA control to full temperature, pressure and DA/Kn programmable systems, the 9210 nitriding programmer is highly sophisticated and simple to use.



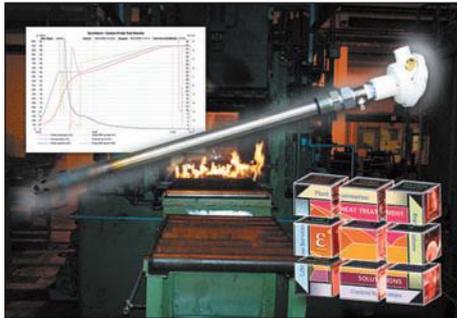
vacuum

Full control panel refit, or keep your existing I/O and vacuum controllers and upgrade to our state of the art computerised interface and 9220 Vacuum Furnace Controller. Portable temperature survey recorders to AMS 2750D.

[info@supersystemsuk.co.uk](mailto:info@supersystemsuk.co.uk)  
Tel/fax: +44 (0)121 329 2627

**EUROTHERM LAUNCHES LOW-COST CARBON PROBES ACROSS EUROPE**

Eurotherm engineers have developed a range of robust, competitively-priced carbon probes for the heat treatment industry. Manufactured in an ISO 9001-approved facility, the *ECProbe* from Eurotherm is accurate, has fast response times and consistently performs to high standards.



Cost savings and increased reliability can be achieved with a new feature unique to the *ECProbe*, the N type thermocouple. The N type is more stable than a K type and more cost-effective than R and S types. All four types are available as required.

Reduced furnace downtime can also be achieved as the probes have been designed with additional ventilation. This reduces the amount of carbon build-up on the tip of the sheath, therefore increasing the lifespan of the probe. Eurotherm is also offering a burn-off port as standard. Heat treatment technical manager, Nigel Tucker says: "The European heat treatment industry demands competitively-priced high-quality carbon probes, with fast service back-up. Eurotherm offers all of this, but it is also the only probe manufacturer to offer an N type thermocouple, which gives long-term stability advantages over a K type thermocouple with no cost disadvantage."

A 24-hour maintenance service and next-day despatch for new probes will be of major advantage for customers within the European Union. Coupled with the Eurotherm range of furnace controls, along with automation products and solutions, the probes, will allow customers to benefit from the extensive Eurotherm application expertise and knowledge base.

The *ECProbe* is supplied with fast-connect DIN plugs for the electrical headbox connection and comes in two standard lengths – 600 and 900mm (550 and 850mm insertion depth). They are available from the Eurotherm Webstore: <http://my.eurotherm.co.uk>

Eurotherm is a key business within Invensys, the global automation, controls and process solutions group.

**Diary**

**January 29 2009**  
**CHTA PUBLICITY SUBCOMMITTEE\***  
 Birmingham, England

**February 12 2009**  
**CHTA MANAGEMENT COMMITTEE\***  
 Birmingham, England

**February 16-20 2009**  
**NADCAP MEETING**  
 Dallas, Texas, USA  
[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)

**March 3 2009**  
**INTRODUCTION TO HEAT TREATMENT**  
 Rotherham, England  
[www.namtec.co.uk](http://www.namtec.co.uk)

**March 4 2009**  
**BIFCA Technical Series:**  
**BURNER TECHNOLOGY & SELECTION**  
 West Bromwich, England  
[www.bifca.org.uk](http://www.bifca.org.uk)

**March 10-11 2009**  
**HEAT TREATMENT FOR HEAT TREATMENT PROFESSIONALS**  
 Rotherham, England  
[www.namtec.co.uk](http://www.namtec.co.uk)

**March 10-13 2009**  
**THERMIC 2009**  
 Lyon, France  
 France's thermal processing exhibition is one of nine trade shows at Industrie Lyon 2009:  
[www.industrie-expo.com](http://www.industrie-expo.com)

**April 22 2009**  
**BIFCA Technical Series:**  
**IMPROVING FURNACE OPERATION AND DESIGN THROUGH THE USE OF THERMAL MODELLING**  
 West Bromwich, England  
[www.bifca.org.uk](http://www.bifca.org.uk)

**April 26-29 2009**  
**4TH INTERNATIONAL BRAZING AND SOLDERING CONFERENCE & EXHIBITION**  
 Orlando, Florida, USA  
[www.aws.org/education/ibsc/](http://www.aws.org/education/ibsc/)

**April 30 2009**  
**CHTA PUBLICITY SUBCOMMITTEE\***  
 Birmingham, England

**May 11-13 2009**  
**CONTROLLED ATMOSPHERE ALUMINIUM BRAZING SEMINAR**  
 Cleveland, OH, USA  
[www.secowarwick.com/seminar/seminar.html](http://www.secowarwick.com/seminar/seminar.html)

**May 21 2009**  
**CHTA MANAGEMENT COMMITTEE/ AGM\***  
 Birmingham, England

**June 9-11 2009**  
**SUBCON 2009**  
 Birmingham, England  
[www.subconshow.co.uk](http://www.subconshow.co.uk)

**June 9-12 2009**  
**NEW CHALLENGES IN HEAT TREATMENT AND SURFACE ENGINEERING**  
 Dubrovnik, Croatia  
 Conference in honour of Prof B Liscic.  
[www.fsb.hr/hdtoip](http://www.fsb.hr/hdtoip)

**July 13-17 2009**  
**NADCAP MEETING**  
 Istanbul, Turkey  
[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)

**July 22-24 2009**  
**THERMOTEC 2009**  
 Tokyo, Japan  
 5th International Exhibition on Industrial Furnaces, Thermal Technology, Equipment and Materials.  
[www.mesago-messefrankfurt.com/thermotec/english/](http://www.mesago-messefrankfurt.com/thermotec/english/)

**July 30 2009**  
**CHTA PUBLICITY SUBCOMMITTEE\***  
 Birmingham, England

**August 6 2009**  
**CHTA MANAGEMENT COMMITTEE\***  
 Birmingham, England

**September 14-17 2009**  
**25TH ASM HEAT TREATING SOCIETY CONFERENCE & EXPOSITION**  
 Indianapolis, Indiana, USA  
<http://asmcommunity.asminternational.org/content/Events/Heatreat/>

**September 23-25 2009**  
**HEAT TREATMENT 2009**  
 Moscow, Russia  
[www.mirexpo.ru/eng/exhibitions/heat\\_treat09.shtml](http://www.mirexpo.ru/eng/exhibitions/heat_treat09.shtml)

**October 7 2009**  
**BIFCA Technical Series:**  
**BURNER TECHNOLOGY & SELECTION**  
 West Bromwich, England  
[www.bifca.org.uk](http://www.bifca.org.uk)

**October 7-9 2009**  
**65TH HÄRTEREI-KOLLOQUIUM**  
 Wiesbaden, Germany  
 German-language heat treatment conference and exhibition:  
[www.awt-online.org](http://www.awt-online.org)

**October 20-22 2009**  
**UNDERSTANDING HEAT TREATMENT**  
 Birmingham, England  
 See page 7. [www.sea.org.uk/whtc](http://www.sea.org.uk/whtc)

**October 27-30 2009**  
**4TH ASIAN CONFERENCE ON HEAT TREATMENT AND SURFACE ENGINEERING**  
 Beijing, China  
[www.chts.org.cn/4achtse/4achtsecallingforpapers.htm](http://www.chts.org.cn/4achtse/4achtsecallingforpapers.htm)

**October 28 2009**  
**BIFCA Technical Series:**  
**IMPROVING FURNACE OPERATION AND DESIGN THROUGH THE USE OF THERMAL MODELLING**  
 West Bromwich, England  
[www.bifca.org.uk](http://www.bifca.org.uk)

**October 29 2009**  
**CHTA PUBLICITY SUBCOMMITTEE\***  
 Birmingham, England

**November 12 2009**  
**CHTA MANAGEMENT COMMITTEE\***  
 Birmingham, England

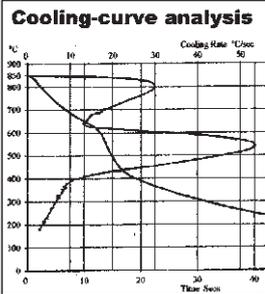
**December 1-3 2009**  
**1ST MEDITERRANEAN CONFERENCE ON HEAT TREATMENT AND SURFACE ENGINEERING**  
 Sharm El-Sheikh, Egypt  
[www.ehts-eg.org](http://www.ehts-eg.org)

*\*Members wishing issues to be raised at CHTA meetings should notify CHTA's Secretary at [mail@chta.co.uk](mailto:mail@chta.co.uk)*

# Quench oil regeneration

**COST-EFFECTIVE / ENVIRONMENTALLY SOUND**

- Spent quench oils brought back to original specification by removal of contaminant water/solids and replenishment of additive packages.
- Result: clean, dry and sterilised quench oils, at a fraction of the cost of virgin products.
- Cooling-curve analysis available to confirm quenching performance characteristics.
- Negates disposal problems.
- Unique combination of technical expertise and practical experience gained through over 50 years of oil reconditioning and recovery.
- Accredited to ISO 9001/2000 and ISO 14001.



**MIDLAND OIL REFINERY LTD**

Tel: 0121 585 6006

Fax: 0121 585 5405

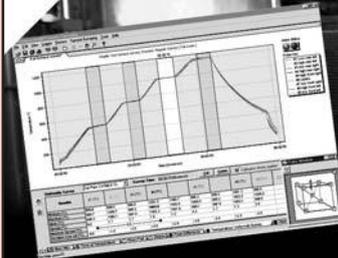
E-mail: [info@midlandoil.co.uk](mailto:info@midlandoil.co.uk)

Shelah Road, Halesowen,

West Midlands B63 3PN

[www.midlandoil.co.uk](http://www.midlandoil.co.uk)

**NOW  
UPDATED FOR  
AMS 2750  
REVISION D**



## Temperature Uniformity Surveying ...

**With a Datapaq system and Insight Survey analysis software you can...**

- Minimise downtime and cut costs
- Supervise, report and make all relevant Temperature Uniformity Surveying calculations to AMS 2750D specification
- Profile continuous furnaces to see actual product temperatures
- Receive real time data from within the furnace to make instant decisions

DATAPAQ Limited,

Deanland House, 160 Cowley Road, Cambridge CB4 0GU, UK

Tel: +44 (0)1223 423141

Fax: +44 (0)1223 423306

Email: [sales@datapaq.co.uk](mailto:sales@datapaq.co.uk)

Web: [www.datapaq.com](http://www.datapaq.com)

**DATAPAQ**

## Advertising in *Hotline*

*Hotline* is not just a vehicle for advertising from suppliers to the trade; advertisements from CHTA members are also welcome.

The 2009 single-insertion charges for black-and-white ads are:

- Quarter page (121mm high x 86mm wide): £173+VAT;
- Half page (121mm high x 178mm wide or 254mm high x 86mm wide): £305+VAT;
- Full page (254mm high x 178mm wide): £546+VAT.

For full-colour ads, add an extra £230+VAT to each of these charges.

Advertisers in four consecutive quarterly editions of *Hotline* are entitled to a series rate where all of the above prices are discounted by 20% per insertion.

The deadline for booking ads in March's *Hotline 115* is February 20th. For further details, contact *Hotline* Editor Alan J. Hick (tel: 0121 329 2970; e-mail: [mail@chta.co.uk](mailto:mail@chta.co.uk)).



## Anhydrous Ammonia

Competitive Pricing & Nationwide Delivery

Many sizes available, 56kg cylinders, 530kg drums and 18 ton bulk deliveries

Please call or visit our website  
[www.BlendedProducts.com](http://www.BlendedProducts.com)

Tel: 01652 680555 or 01482 329333

Wilberforce Court, Alfred Gelder Street, Hull, HU1 1BR

# Century Heat Treatment & Plating Company Ltd

Director Peter Stokes outlines the history and activities of one of CHTA's Birmingham-based members.

Century has been around for a long time. The company was originally incorporated as Century Polishing and Plating Co. Ltd in 1933 by Henry Stokes. He opted to call the company "Century" to reflect 100 years of a father/son working relationship.

Henry's formative years, spent with Webley and Scott Ltd, were instrumental in his vision of his own company providing a service to the gun trade in Birmingham. This eventually progressed to service all areas of manufacturing.

During the ensuing years, all of Henry's eight children were employed by the company at some stage, with his two sons - Edward and Laurie - being the main participants. On Edward's demise in 1966, Laurie bought all the remaining shares in the company.

Following the three-day week in the early seventies, Laurie decided to retire and sell the company to a friendly competitor in the plating industry. The company changed its name to Century Heat Treatment and Plating to reflect the amount of heat treatment that was being performed at that time.

Fifteen years later, Andrew Lilly, a director of the plating company, and Peter Stokes arranged a management buy-out and the company progressed.

Today, Century is in a strong position to weather the current recession as a one-stop-shop for metal finishing. Most of the heat-treated parts processed continue on for plating and, being all under one roof, there is a considerable saving in time, transport and administration costs for the customer. The plating side of the company also assists heat treatment by providing a



Century's Nick Archer (left) and Peter Stokes at this year's CHTA AGM.

## Market Movements

ANALYSIS OF QUESTIONNAIRE REPLIES RELATING TO 31 CHTA MEMBER SITES

"THIS QUARTER" =

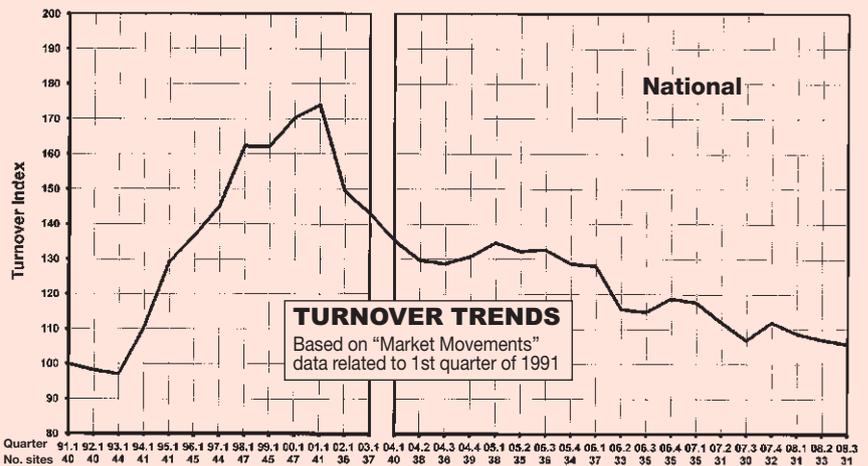
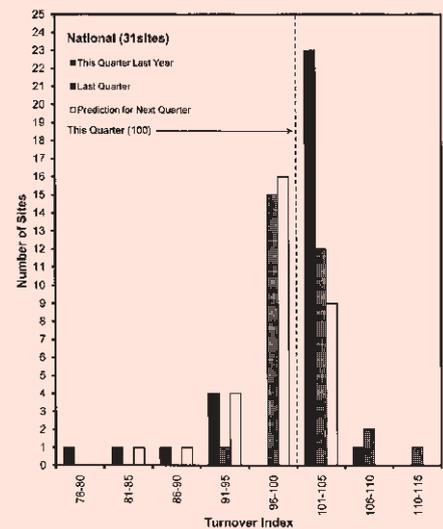
**1 JULY –  
30 SEPTEMBER  
2008**

= **TURNOVER INDEX 100**

### National

OVERALL ANALYSIS  
(31 SITES)

	Mean index
This quarter last year	<b>99.4</b>
Last quarter	<b>101.1</b>
Predicted next quarter	<b>99.0</b>



versatile cleaning operation pre and post heat treatment.

As much of the heat-treated work is plated afterwards, the company has maintained its use of salt-bath processing to produce the clean finish required by the platers. Accreditation to the original BS 5750 and onwards to BS EN ISO 9000:2000, by both sides of the company, ensures customers' confidence in quality.

Recent advances include the appointment of Ricky Lilly as a director and Nick Archer as Heat Treatment Manager. Nick has a wealth of experience in salt-bath processing, gained from his previous employment, especially of small batch work and localised end-only hardening using jigs for vertical quenching to minimise distortion - a facility of which even competitors take advantage.

More recently, an association with Heat Treatment Solutions in Redditch has increased the company's ability to process components through austempering and vacuum furnace methods.

### STATESIDE STATS

#### THIRD QUARTER SEES NORTH-AMERICAN HEAT TREAT SALES UP 3.9%

Participating members in the Metal Treating Institute's Monthly Sales Statistics Program reported nine-month sales to the end of September of \$666.9million, a gain of 3.9% over the same period in 2007 when sales totalled \$641.7million.

September billings were \$72.8million, a jump of 4.5% over September 2007 when they amounted to \$69.6million. The latest figures for October indicate sales of \$76.7million, a slight decline of 1.4% from October 2007's \$77.8million.

Please send your news items for **Hotline 115** to [mail@chta.co.uk](mailto:mail@chta.co.uk)  
**Deadline: February 27th**