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Member news

NEW CONTINUOUS LINE AT HEAT TREATMENT 2000

Heat Treatment 2000 Ltd took delivery of its new one-tonne/hour mesh-belt hardening and tempering line just before Christmas 2011 and, utilising its own staff, had it ready for commissioning by mid-February and in production by March 1st this year.

Nearly 46m (150ft) in length, the equipment comprises: automatic loading machine; pre-wash station heated by heat recovered from the hardening furnace; the controlled-atmosphere gas-fired hardening furnace; quench tank containing 19,000 litres of oil; another heated wash; and the tempering furnace. A soluble-oil quench tank at the end of the line can be used for a final cosmetic rinse or, if required, can be emptied to provide a dry finish.



The plant is computer-controlled and the process menu-driven from loading to discharge. The electrical control panels and all computer equipment are housed in a separate air-conditioned environment.

Supplementing the capacity of the existing 2.7tonne/hour Can-Eng line, the new plant will also be able to handle smaller parts and offer an extended range of treatments including carburising, carbonitriding and case-hardening.

"We are already seeing the benefit of this £1million investment" comments Operations Director, Paul Barber, "and have

received significant enquiries from outside our existing customer base, in addition to having a back-up to our current facility and the flexibility to meet varying customer demands."

ALLOY HEAT TREATMENT INVESTS TO KEEP WORK IN UK

Dudley-based Alloy Heat Treatment (AHT) has invested in an innovative "Oven 25 machine", becoming the only firm in the UK able to carry out the heat treatment of oversized aluminium-alloy parts.

The result is work remaining in the UK, rather than being off-shored to Europe, previously the only other alternative. AHT can now look forward to further growth as the equipment opens up new opportunities within existing aerospace and automotive markets.

AHT specialises in heat treating aluminium-alloy components for the aerospace, automotive and advanced engineering sectors. The company can now help clients process pieces that fit into the basket size of 2630mm X 2400mm X 2300mm in a shorter turnaround time, therefore increasing productivity.

Ian Perks, Sales Manager, said: "AHT made a strategic decision to invest in a large top-loading oven which would free up capacity on our fully-automated rapid-quench drop-bottom line. Due to an enquiry from Jennings Foundry, at the time of specifying the oven, it was constructed to carry out high- and low-temperature treatments. We are in the process of getting the oven Nadcap approved, which will allow us to take on larger components for the aircraft industry."

Dorset-based WRES Ltd is an example of a company drawn to AHT because of the new investment. WRES specialise in the welding and fabrication of aluminium, stainless and mild steel for sectors such as marine, food, defence, architecture and petrochemical. The company chose AHT as they were the only firm within the UK which offers the service of heat treating larger parts. The firm has also utilised the new Oven 25 for its large fabrication pieces



which are being used for a camera equipment jig, the Isis Frame and the Tool Sled, to film beneath the sea.

WRES Managing Director Alan Hamer said: "Alloy Heat Treatment is the only firm within the UK which we discovered to have the Oven 25 machine for our specific use. If we didn't have this option, we would have had to send the work to Europe, which would be a longer turnaround time and not very practical for us. I think Alloy Heat Treatment's new investment is a triumph for keeping manufacturing work within the UK, as opposed to exporting it out to Europe. In turn it has helped us satisfy our clients' requirements."

AHT are the largest subcontract heat treater in the UK for aluminium alloys. Established for almost 40 years at its Peartree Lane site, the company heat treats everything from small fixings to components five metres long.

TRIPLE NADCAP MERIT STATUS FOR TTI GROUP

The Nadcap merit program exists to reward superior performance in Nadcap audits, suppliers on merit being able to reduce their audit frequency from every twelve months to up to every twenty-four months. As Arshad Hafeez, Executive Director of Global Business Development and Corporate Strategies at the Performance Review Institute (the accrediting body for Nadcap) observes: "The Nadcap audit is a stringent process designed to highlight members of the aerospace supply chain with outstanding quality and

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engineering processes. Entry into the merit program represents an industry-wide recognition for those suppliers who really are the *crème de la crème*”.

TTI Group has now passed this auspicious milestone, with all their Nadcap-accredited sites achieving either 18- or 24-month merit program status during 2012.

From a total of seven strategically located and focused plants in the UK, TTI Group has three that are actively engaged with aerospace. Located at Cheltenham, Letchworth and Telford, these sites have been accredited to the highly-demanding Nadcap standard since 2003 and, today, are approved to no fewer than 16 different process capabilities under 21 approval titles. Reflecting on a very successful year so far, Yvette Aston, Head of Quality for TTI Group, notes: “Achieving this status has also allowed us to concentrate our efforts in other growth areas. Hot isostatic pressing (HIP) has been added to our Nadcap scope and we have further enhanced our prime approvals. Our Rolls Royce accreditations now include: RPS 614 for HIP; RPS 323 for titanium processing; and RPS 194 for vacuum brazing. In addition, specific approvals from Westland, Snecma and Turbomecca have been added to a long list that includes Boeing, UTC Aerospace, Airbus and BAE”.

Managing Director Andy Borg considers that these approvals put TTI Group in the strongest position to serve a growing aerospace market: “In conjunction with other niche markets and technology activities, our relentless pursuit for service excellence and robust process method is continuously ‘sense-checked’ through industry, prime and customer approval.

“Our achievements serve to demonstrate our robustness to existing, and prospective, customers in exceeding their



current and future business needs. This commitment is being further developed through our recent deployment of the SC21 program, where we have a clear and deliberate intent to achieve this prestigious and coveted supplier status award”.

NEW DIVISIONAL DIRECTORS APPOINTED AT KEIGHLEY LABS

Keighley Laboratories, leading industry experts in the analysis, testing and heat treatment of metals, has promoted three of its long-serving managers to divisional directors, in recognition of their contribution to past performance and their key roles in future growth plans.

Together clocking up almost a hundred year’s work experience with the West-Yorkshire firm, Michael Emmott becomes Divisional Commercial Director for the Heat Treatment Division, Matthew Mellor is now Divisional Technical Director responsible for the Technical Services Division, including the test house, machine shop and chemical laboratory, while David Wright has been named Divisional Production Director for the Heat Treatment Division.

“We are entering an important new phase

for the company, especially with the opening of our latest production facility this year, and these promotions were designed to help restructure the senior management team, to lead the company forward,” says MD Debbie Mellor. “By assuming greater responsibility, each new divisional director will have ownership of his respective area and the capacity to implement strategic changes, instigate further process improvements and ensure our continued market progress.”

Michael Emmott joined Keighley Labs in 1969 as a trainee heat treatment inspector and progressed to induction hardening, before a ten-year stint as night-shift Inspector, then supervisor. He later transferred to the company’s commercial activities, becoming Commercial Manager for the heat treatment business area and travelling extensively both at home and overseas.

In his new role, Michael will be fully responsible for divisional sales and marketing, managing the company’s national and international customer base and targeting fresh business opportunities arising from the new production facility and other technical initiatives.

A qualified mechanical engineer, Michael gained a BSc in Maths and Computing from the Open University and also has a teaching diploma, allowing him to lecture at colleges of further education. He is married with three daughters.

Matthew Mellor joined Keighley Labs in 1990 from Bingley Grammar School, as a trainee metallurgical technician. He then progressed by stages from technician, to senior technician, then Test House Supervisor, before assuming his previous role of Test House Manager.

In his new position, he will undertake planning, co-ordination and management

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Keighley Labs' new divisional directors (l. to r.) David Wright, Michael Emmott and Matthew Mellor.

control of the company's test house, machine shop and chemical analysis departments, monitoring personnel performance and ensuring adherence to quality standards, at the same time looking to improve overall efficiency and optimising costs. He will also maintain and expand the company's technical accreditations, adding to an already extensive list that includes UKAS, British Aerospace, Bombardier, Rolls Royce and Airbus, as well as furthering the process of securing Nadcap approval. A qualified metallurgist and CAA-approved supervisor, Matthew is married and has one daughter.

David Wright joined Keighley Labs in 1978 as a general operative, subsequently gaining hands-on experience of most roles in the heat treatment shop. He was later promoted to Supervisor, then Production Manager, before being elevated to Divisional Director.

In his new post, David will manage a team of up to 40 staff and be in overall charge of the company's production processes and ancillary operations. He will oversee the integration of the new production department, toward the end of this year, and ensure that the total heat treatment function conforms to expected quality standards and turnaround times. He will also play a key role in evaluating the application of advanced techniques to existing heat treatment processes.

Having gained a Diploma in Management through a two-year distance-learning programme at Newcastle College, David later added a Diploma in Business Coaching, gaining an insight into team and organisational dynamics.

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BODYCOTE ANNOUNCES NEW AIR FURNACE CAPACITY

In order to supplement its network of such furnaces there, Bodycote is installing two new large air furnaces at its Stillington heat treatment plant.

The first, with working dimensions of 6m long x 2m wide x 1.8m high and a maximum weight capacity of 15,000kg, is now operational. It has an operating temperature range of 350-1250°C with a uniformity of $\pm 5^\circ\text{C}$ up to 750°C and $\pm 10^\circ\text{C}$ over 750°C.

A second new furnace, due to be delivered early in October and operational in late December, will have a similar operating range but, with a 25,000kg weight capacity, will be 10m in length.

This significant investment by Bodycote, in excess of £0.5million, for what is thought to be amongst the largest air furnace capacity available on a subcontract basis in the UK, is needed to service Bodycote's growing customer demands for high-quality air heat treatment in support of the aerospace, oil, gas and general industrial markets.

The furnaces are supported by all the necessary ancillary equipment, including oil- and water-quench capability and extensive tempering capacity, and meet all national and international quality specifications, including Nadcap.

ALUMINIUM HEAT TREATMENT – A NEW ADDITION TO WALLWORK'S CAPABILITY

Wallwork has invested heavily in heat treatment capacity to meet its growing aerospace order book. Earlier this year, an investment of over £500,000 provided a new vacuum furnace (seen in our cover picture). Heat treatment of a greater range of components includes single items up to 1.5m in length and 1.5 tonne in weight as well as bulk batch processing of smaller components.

This investment continues and a newly-refurbished aluminium heat treatment oven is currently being installed at Wallwork Heat Treatment's Bury factory. This former Nadcap-approved furnace will process pressed aluminium components down to 0.5mm thickness. The oven has dual-quench facilities: water and polymer glycol cooling for more even heat extraction from components, giving less distortion and lower stress in thin metal sections. The furnace accommodates a basket capacity of up to 2m³ and processes loads up to 500kg in a single cycle.

The aluminium heat treatment oven is one of a handful of such facilities currently available in the UK. Installed and commissioned over the summer, it will initially take commercial castings, forgings and

machined components. Once it's fully operational, the company will be seeking Nadcap approval to enable aerospace components, such as landing gear, wheels and brackets, to be processed.

"We have a strategy to invest and expand the range of heat treatment, coating and research and development services for the aerospace customers. To support this we will continue to bring in new plant and processes," said Sales Director Simeon Collins.

CELEBRATION AT ALPHA-ROWEN



A July party at Tipton-based Alpha-Rowen Ltd marked Managing Director Kevin Rowen's 60th birthday and 25 years in business with his own company. In our picture he is flanked by CHTA Secretary Alan J. Hick (left) and Alpha-Rowen's Operations Director Mike Leach.

Please send news items for December's Hotline 130 to: mail@chta.co.uk Deadline: November 22nd

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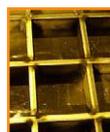
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Outsourcing heat treatment – some experiences

*Manufacturing companies are increasingly being urged to entrust specialist contract heat treaters rather than process in-house. CHTA Chairman **Chris Kenward**, Process Engineering Manager at Ajax-TOCCO International Ltd, reviews some of his company's involvements and the lessons learnt.*

Several articles published here over the last few years have discussed the benefits of "Outsourcing", the most recent being that by Debbie Mellor of Keighley Laboratories Ltd. Her *Hotline* 124 assessment sets out the various factors most succinctly.

Active in this field for some years, my company has cited such benefits as the basis for the case we have presented to our potential customers. I thought it might be useful to share some of our experiences.

AjaxTOCCO are unusual in that we operate subcontract induction-hardening facilities in England and the USA, but the group also manufactures equipment for sale to in-house operators, for our own use, and for other subcontract facilities. This has played a part in our initial outsourcing success but, in the main, other factors have been the prime mover in the customer's decision.

Four outsourcing examples

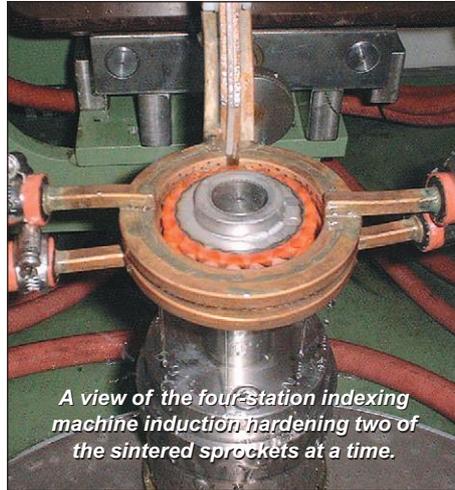
Our ability to manufacture or modify equipment for our own use was the major reason for gaining our first outsourcing contract around ten years ago. The company in question operated their own induction equipment, hardening sintered crankshaft sprockets, but new contracts exceeded their capacity. They had no room to expand internally so they had no option but to outsource.

I had experience working for automotive component suppliers so, luckily, was familiar with the PPAP documentation, process FMEAs etc. that they required. Otherwise, this would have been a large obstacle to overcome.

We built a dedicated indexing-table machine, with a capability of hardening up to 30,000 parts per week, which included an automated crack-detection machine and part marker supplied by the customer.

The contract we negotiated was for the life of the parts, and this project contributed a large proportion of our turnover for more than four years. However, we did learn a salutary lesson, regarding working with the first-tier automotive supply industry, when we were given two weeks notice that the work was being transferred to their plants abroad, with the subsequent closure of the

UK facility. We judged that it was too costly to pursue compensation for breaking the contract, but the sudden loss of turnover did take some time to recoup.



Unreliability of aging equipment was the main factor with our next success, but this involved another automotive component supplier. We had reservations about further investment, but most projects involving a substantial volume of parts are automotive-related.

The unreliability of their own equipment had led them to us, two or three years earlier, and we had become their "back-up" source during these frequent breakdowns. Following several approaches, they finally agreed to send us their parts on a permanent basis and we still continue to harden them today.

Another lesson learned was that automotive component manufacturers do not carry any stock and, as heat treatment is usually the second-to-last operation, you have to be very responsive in terms of turnaround times.

Our next example is very recent, with volume production due to start shortly. It is unusual in that our customer had to make a decision whether to purchase equipment or outsource. We did have the opportunity to quote for both options, so you could say that we had all the bases covered, but we did put the case for both.

They opted to outsource principally because of their lack of experience and the cost of providing all the "back-up" personnel and facilities that a heat treatment process requires. Part of this decision-making involved their customer's requirement for assessing heat treatment operations to CQI-9, and it looks likely that this will be pushed down the supply chain more frequently in the future.

One positive, but more unusual, aspect of this contract was that our customer was

prepared to contribute to the cost of machine modifications and tooling, greatly reducing our financial outlay and risk level. Our final example was another situation of constant breakdowns of old equipment requiring our support for their production. This company had inherited equipment from other plants in their group that had suffered closure, a familiar theme a few years ago. They had no experience of operating heat treatment equipment of any description, so did not have the staff or knowledge base to support the operation effectively.

We have supported them both from a production point of view and with technical/metallurgical assistance. This is another area where confidence can be built up with a potential customer, and I'm sure this played a part in their decision-making. After reviewing the costs of these breakdowns and the cost of day-to-day operation, they have decided to outsource all their future heat treatment requirements, even though this creates some logistical problems for them.

Lessons learnt

So what have we learnt from these experiences:

Positives: outsourcing can give a substantial boost to turnover, particularly when automotive-related.

Negatives:

- usually a lot of extra paperwork involved, particularly in the early stages;
- high risks, particularly if capital expenditure is involved or if line-stoppage costs form part of the contract;
- automotive customers in general, and their turnaround schedules in particular, can be very demanding.

In conclusion, I would say that, although the positives and negatives look a little one-sided, there is another very good reason outsourcing should be actively pursued.

It has not been said very often but, looked at logically, there is only a certain volume of heat treatment being carried out at any one time in this country and it has generally been reducing along with our manufacturing base. Thus any effort to maintain or increase turnover on our part would mean competing with other heat treaters, mainly on price. This is one factor that has led to a squeeze on margins, a situation exacerbated by rising energy costs.

Therefore, persuading in-house heat treaters to outsource is a way of increasing the volume of work available and, hopefully, reversing this trend.



When **Bill Hewitt** retired recently from *Bodycote Heat Treatments, Hotline* Editor Alan J. Hick invited him to mark the end of his sterling career as one of our industry stalwarts. In typically wry fashion, here Bill reflects on...

A lifetime in heat treatment

When I received Alan's e-mail offering best wishes for my retirement, it came as no surprise that it included a request for another literary piece.

Over the years, Editor Alan has encouraged me to write, from a hands-on point of view, for Wolfson Heat Treatment Centre's *Heat Treatment of Metals* journal and for CHTA's *Hotline*, tasks that I have always enjoyed thanks to his enthusiasm. In return, I have, for several years, delivered the quality systems session on Wolfson's *Understanding Heat Treatment* course, mainly because it's probably as near to "stand-up" as a metallurgist can get.

THE EARLY YEARS

It was only after I surprised everyone at Queen Elizabeth's Grammar School in Mansfield, by getting seven GCEs, that I was noticed, but my mind was made up: I wanted to start work.

Two days after my 16th birthday in 1966, I began my first job with Sheepbridge Sintered Products Ltd. The ad in the *Notts Free Press* had said "trainee laboratory assistant"; visions of bubbling liquids and mad scientists in white coats sprang into my young impressionable mind. So, when I was shown to the metallurgical laboratory and set on testing apparent density and flow rate of various metal powders, I was, to say the least, disappointed.

A five-year training programme saw me go through two years at Chesterfield College of Technology and three at Sheffield Poly (I refuse to call it Hallam University) on day-release. This meant travelling a 60-mile round trip three times a week and working in between. By 1972, with a Polytechnic Certificate in Metallurgy and as a Licentiate of the Institution of Metallurgists, my academic progress stopped. I had reached the same level of qualification as my boss - 12 years my senior. This niggled me for the next 27 years.

In five years I had learnt a lot, including not to stand directly in front of a 70ft-long

mesh-belt sintering furnace, full of endothermic gas, when the wind was blowing straight up the shop - unless you wanted a red face and no hair (the signs were there in the scorched paint on the Hilger Watts IR gas-analyser cabinet).

In 1972, Chief Metallurgist Ron Dixon asked if I would be interested in an opportunity at another group company, Automotive Engineering Ltd based in Kings Lynn. AE machined and finished cast aluminium pistons, predominantly for Perkins at Peterborough. They also manufactured circlips and spring-retainers, mainly in 0.8%C steel (En 42). Small sizes were stamped while larger ones were cropped from trapezoidal-shaped wire coiled into a circle.

The job centred on installation and pre-production development of a cold wire rolling mill and associated bell annealing line. I was also involved in developing a heat treatment shop which consisted of three inline continuous mesh belts for hardening and tempering, all run under dried exothermic gas along with a shaker-hearth and a mesh-belt austempering furnace - and they had never heard of decarb!!!

It was as Assistant Chief Inspector at AE that I gained my first experience with quality systems, as the site held DEF STAN 05-21 series of standards - the forerunner of BS 5750 and ISO 9000.



Bill Hewitt in action as speaker on quality assurance at Wolfson's annual "Understanding Heat Treatment" course.

BEARING UP

Metallurgists in East Anglia are as rare as rocking-horse manure - I was the only one between Laurence Scott's in Norwich and Perkins in Peterborough.

In relocating to King's Lynn, I had married. The husband of one of my wife's friends was Forge Manager at Cooper Roller Bearings Co. Ltd, the town's largest engineering employer. CRB was looking for a metallurgist to bring a more technical approach to production, in general, and heat treatment in particular - so I was poached.

I joined CRB in April 1976 to the relief of their foundry chemist who went into purchasing, leaving me in technical control of cast-iron and non-ferrous foundries and

a variety of metal-forming and heat-treatment processes. CRB manufactures split roller bearings from derivatives of 534A99 (En 31) C/Cr bearing steel. For the next 12 years I expanded my metallurgical knowledge in a way that would have been difficult anywhere else.

A small (9ft³) Efco vestibule-type sealed-quench furnace featured in three memorable incidents. The first was a confrontation with a senior fire officer over a quench-oil fire. The Efco quench tank had a cooling system consisting of a domestic radiator with cold water running through it. A leak had contaminated the oil in the tank, which was foaming in the site glass, the inner door had jammed partly open and the oil temperature was rising. The tank was flooded with nitrogen from a bank of cylinders. We all know opening the door to "have a look" is not a good idea, but it is exactly what the fire officer demanded when he came into the shop with his team complete with hosepipes.

In a long debate over the proximity of two large propane tanks on one side and a council estate on the other, I asked him to hang on for 30 minutes, before opening the door, so that I could get to the other side of Swaffham, 15 miles up the A47, where I could hear the bang but be far enough away. Fortunately, during the discussion, the temperature had peaked and started to fall; panic over.

The Efco featured again in 1987, when the MD decided it was the right time to sell the company to a consortium of merchant banks and investment management companies. My boss, who had been Technical and Design Manager for over 20 years, was replaced by an ambitious chap with no heat treatment knowledge. One morning, I got the call to his office and a demand for a technical analysis of how to convert the Efco from carbonitriding to carburising. The report had to be with him the following morning. "Turn the ammonia off and the temperature up" was rejected as flippant; it went downhill when I asked how many times he would like me to write this in the report. His "There has to be more to it than that" was met with a shrug and a request for him to enlighten me. It was at this point I knew I was going to have to leave.

During my time at CRB I wrote my first three articles for Alan, on calculating hardenability (*Heat Treatment of Metals* 1981.2), spheroidise annealing (1982.3) and quench oil monitoring (1986.1).

CORBYS

The Efco connection recurred in September 1987 when the furnace broke down badly enough for us to send some carbonitriding to a subcontractor, the



The TQ37 sealed-quench furnaces at Corby.

nearest of which was Blandburgh Nemo's new plant in Corby. In spite of precise instructions, the rings came back under-cased. A visit to Corby for a discussion was more interview than resolution of a complaint. I hadn't taken much notice of the Corby furnaces – how little did I know about TQ37's.

The following February, I applied for a Sales Engineer's job at Corby and came second to John Jervis., A call from former CHTA Chairman David Wilkins, a few days later, offered me the position of Production Manager / Works Manager designate which I accepted.

Unbeknown to me, the job had been offered around the industry and, on seeing the two largest sealed-quench furnaces in Europe, the universal response was a laugh and "You must be bloody joking". I just thought they were big!

When I was dropped off on my first day, little did I know what I had let myself in for – a "Parcel of Rogues" if ever there was one. My induction was centred around the job not being 9am to 5pm (more like 5am to 9pm) and a caution that one in three managers end up divorced – a warning I would remember years later.

One thing that I learned quickly with Blandburgh was they worked hard and played hard. (A word of advice: don't ever wear a cravat to go down the pub with a bunch of heat treaters, unless you really enjoy prolonged ridicule).

The problem with the Ipsen TQ37 sealed-quench furnaces was that, with a 72ft³ load envelope, the surface area of the brickwork lining was so large that output of two 1500ft³/h endo generators couldn't condition one furnace – which explained the shallow case on CRB's rings. It was time to introduce *Supercarb*, Ipsen's in-situ atmosphere solution which, to the surprise of some, actually worked.

Fortunately at CRB I had been instrumental in replacing two endo generators with BOC's *Endomix* direct atmosphere system. Six years experience convinced me that *Supercarb* might work, which it did. The only drawback was that the new furnace atmosphere was so aggressive that it knocked out oxygen probes in about half

their guaranteed life, meaning that we didn't pay for one for about four years! You could write a book about Corby and its characters, but few would believe it as it would sound too far-fetched. So Alan got a "User's View of *Supercarb*" article instead (*Heat Treatment of Metals* 2000.2).

QUALITY ASSURANCE

By the time TPG joined Bodycote, in 1998, I had had enough of Corby. Derek Alty, in his role as Bodycote's Technical/Quality Director was looking for someone to standardise our UK approach to the challenges which we could see coming to the industry.

First up was ISO 9001:2000, a standard of which I have been a "fan" since it was in final draft. I recognised that the changes it would require would encourage continual improvement to grow to the benefit of those organisations which made the effort to change. Another review for Alan, on the impact of ISO 9001:2000 on heat treaters, went a good way to scaring the industry when presented at a Wolfson conference in 2001 and subsequently published (*Heat Treatment of Metals* 2001.4).

To me ISO 9001:2000 has always been a "hippy standard". It doesn't tell you how to do what you do, but it indicates what it expects from a quality-focused organisation – it's about how you think. Derek recognised this and, through first a role as Bodycote's Technical Manager South and then as Group Quality Manager, I was encouraged to drive a process of standardisation across 15 sites on five certificates, gaining ISO on a single certificate in 18 months.



In Hotline 94, Bill assessed the accreditation process after Bodycote became the first UK subcontract heat treatment company to gain Nadcap approval in 2003.

But, behind ISO, we knew there was something bigger: Nadcap.

A visit in 2002 to LA, to observe a four-day Nadcap audit, confirmed our worst fears and we set about planning our approach to our first UK audit in July 2003.

The relationship with Nadcap swung from mutual dislike to mutual respect. We were always vocal when appropriate. I have never understood why its administrators PRI invited us to give presentations (between 2003-2011) which were critical of the Nadcap process. (You know you have made yourself a reputation when you are asked by a PRI staff member: "are you THE Bill Hewitt?"). We did our bit to try to drive improvement, including comment through these pages (see *Hotline* 94, December 2003).

Since the first day of my career back in 1966, I have remained fascinated by the processes we carry out and how we can challenge the physics and chemistry of materials to achieve a particular set of characteristics. However much technology we develop and introduce, there's always that ancient art, be it Merlin's magic or a blacksmith judging temperature by colour (that's not in AMS 2750E!).

UPS AND DOWNS

Life outside of heat treatment has had its up and downs. After a 26-year gap, I achieved my academic ambitions in 1998 with an MIM/CEng by the "mature candidate" route.

In 2001, I joined the 33% who divorce. On the upside, in September 2009 I married Rowena my partner for several years, prior to which I was her accompanist around local folk clubs. She's a lady with much tolerance and a love of horses, which brings us back to blacksmiths.

My two sons from my first marriage are both doing well: Chris lives in Putney and is with the FSA and his older brother, Jez, is setting up an office for his law firm in Singapore. Neither has ever considered following their father into engineering – then again I didn't follow their grandfather down the pit. On the subject of grandfathers, I am due to become one in October – although I am already second granddad to Rowena's four grandchildren.

On the downside, after several years of struggling, in 2008 I joined the same club as Michael J. Fox and Muhammad Ali; early onset of Parkinson's disease was confirmed – but there are worse things.

This year, I took stock and decided it was time to retire early, which I did on 31st July. The hardest part is leaving friends and colleagues, in the UK, Europe and the USA, who I cannot thank enough for their kindness and generosity. Now a new phase starts.

Diary

September 25 2012
BIFCA Technical Series:
BURNER TECHNOLOGY
 West Bromwich, England www.bifca.org.uk

October 2-3 2012
FURNACES NORTH AMERICA 2012
 Nashville, TN, USA
 The Metal Treating Institute's conference and exposition: www.furnacesnorthamerica.com

October 9-11 2012
UNDERSTANDING HEAT TREATMENT
 Birmingham, England
 77th repeat of Wolfson Heat Treatment Centre's course. Details from Derek Close: tel: 0121 237 1122; e-mail: derek.close@sea.org.uk; www.sea.org.uk/whtc

October 9-11 2012
ALUMINIUM 2012
 Düsseldorf, Germany www.aluminium-messe.com

October 10-12 2012
68TH HÄRTEREI-KOLLOQUIUM
 Wiesbaden, Germany
 German-language heat treatment conference and exhibition: www.awt-online.org

October 15-18 2012
TESTEXPO
 Ulm, Germany
 21st International Forum for Materials Testing. www.zwick.de/en/news/testexpo.html

October 18 2012
BIFCA Technical Series:
FURNACE AND BURNER CONTROLS
 West Bromwich, England www.bifca.org.uk

October 19 2012
SEA AWARDS
 London, England www.sea.org.uk

October 23-24 2012
HEAT TREATMENT FOR PROFESSIONALS
 Rotherham, England www.namtec.co.uk

October 23-25 2012
20TH IFHTSE CONGRESS
 Beijing, China www.20ifhtse.org/dct/page/1

October 25 2012
CHTA PUBLICITY SUBCOMMITTEE*
 Birmingham, England

November 7-8 2012
AERO ENGINEERING 2012 /
AUTOMOTIVE ENGINEERING 2012
 Birmingham, England
 Co-locating as part of the Advanced Engineering UK 2012 group of events. www.aeroconf.com / www.ukautoengineering.com

November 8 2012
CHTA MANAGEMENT COMMITTEE*
 Birmingham, England

November 21-22 2012
BIFCA Technical Series:
INDUSTRIAL FURNACE TECHNOLOGY
 West Bromwich, England www.bifca.org.uk

January 31 2013
CHTA PUBLICITY SUBCOMMITTEE*
 Birmingham, England

**Members wishing issues to be raised at CHTA meetings should notify CHTA's Secretary, well beforehand, at mail@chta.co.uk*

Hotline is sad to learn of the death of Australia's **Ray Reynoldson**. He died at the age of 72, on July 4th this year, after a sudden severe stroke.

Graduating from the Royal Melbourne Institute of Technology in 1960, Ray spent most of the next 23 years in the UK. He worked for former CHTA member Met Vac Ltd before setting up the fluidised-bed company Apollo Heat Ltd, based in Telford.

He returned to Melbourne in the 1980s, becoming managing director of Quality Heat Technologies Pty Ltd / Quality Heat Treatments Pty Ltd and one of the major figures in heat treatment in Australia.

Throughout a career spanning over 50 years, Ray focused on developing new technologies and solutions for the heat treatment industry, with particular emphasis on surface diffusion processes. He published 32 journal articles, presented 14 conference papers and wrote the ASM textbook *Heat Treatment in Fluidized Bed Furnaces*. Sincere CHTA condolences go out to Ray's family and friends.

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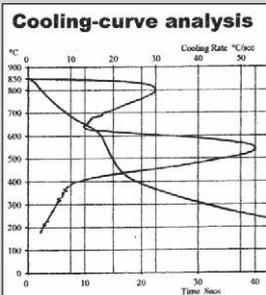
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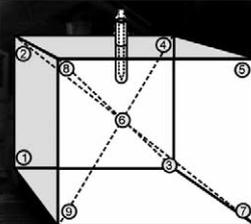
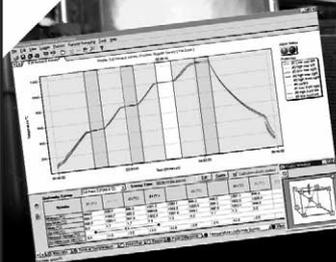
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Climate Change Agreements

With the new agreements starting in 2013, SEA's **Dave Elliott** reports that there's plenty happening on the CCA front. Here he provides a brief update regarding some key publications and deadlines.

Government response

The Government response to the January and March 2012 consultations (accompanied by analysis of responses) has been published on the DECC website at www.decc.gov.uk/en/content/cms/consultations/cca_simp_new/cca_simp_new.aspx

Guidance documents

Now available on the SEA website are draft guidance documents on:

- applying the 70% rule;
- bubbling;
- rules for hybrids;
- recording emissions factors;
- accounting for CHP;
- accounting for renewables;
- accounting for primary energy.

These may be viewed at: www.sea.org.uk/climate-change/information-regarding-new-agreements

Target setting

The target for the heat treatment sector has been agreed at an 18% improvement in energy efficiency by 2020 off a 2008 base year; that's equivalent to 1.5% per annum.

Sector structure spreadsheet

SEA has completed the sector structure spreadsheet by the deadline given by DECC (17th August 2012), which means that all existing CHTA-member climate change agreements will be included in the new agreement.

Re-baselining exercise

The next important exercise is to produce a spreadsheet detailing the new base year data for all of the participants. This is fairly easy for those companies with full eligibility, as the data provided at the end of 2008 can be used, but, for those companies with only partial eligibility, the new 70/30 rule must be taken into consideration.

The SEA will be contacting all participants in the scheme during late September / early October to confirm their new base year data.

Market Movements

ANALYSIS OF QUESTIONNAIRE REPLIES RELATING TO 28 CHTA MEMBER SITES

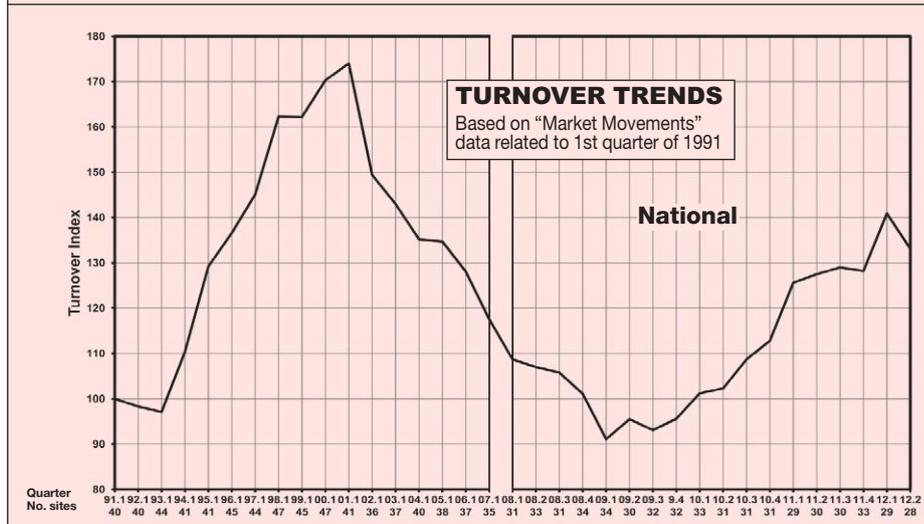
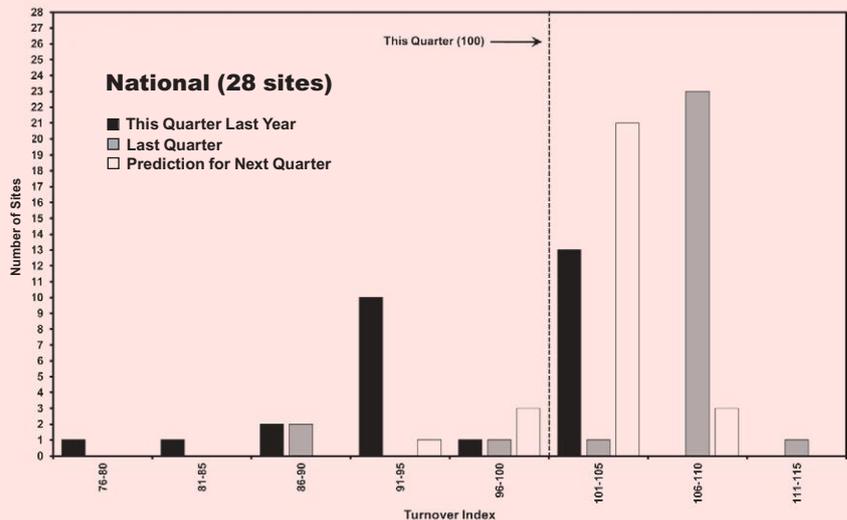
"THIS QUARTER" =

**1 APRIL –
30 JUNE 2012**

= **TURNOVER INDEX 100**

**OVERALL ANALYSIS
(28 SITES)**

	Mean index
This quarter last year	96.6
Last quarter	105.9
Predicted next quarter	101.3



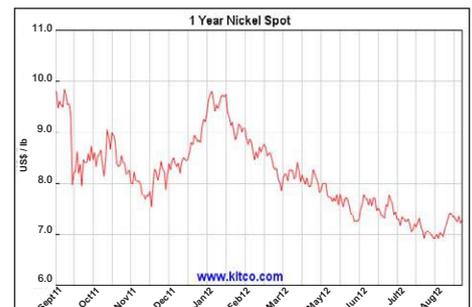
STATESIDE STATS

NORTH AMERICAN HALF-YEAR SALES UP 13.7%

CHTA counterparts participating in the Metal Treating Institute's Monthly Sales Statistics Program reported year-to-date heat-treating sales to June 2012 of \$551.1million, a gain of 13.7% from the \$484.6million recorded for the January-June period of 2011. June billings amounted to \$90.9million, an increase of 5.1% compared with June 2011's \$86.5million.

The latest returns indicate July sales of \$83.3million, a gain of 10.1% over July last year when billings amounted to \$75.6million.

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Please send comment and news items for December's Hotline 130 to: mail@chta.co.uk Deadline: November 22nd