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FSC

Bosch expands

Bosch expands team with three new appointments

Following a sustained period of growth, we have boosted our sales presence in the commercial heating sector with three new appointments.

Bryan Marland joins Bosch as Commercial Technical Manager for the South West region. With over seven years' experience in the heating industry and having led successful high profile projects in the past, Bryan will be responsible for growing Bosch's share of the commercial heating market within this region.



Bryan Marland

Joining Bryan is **Lance Blackburn**, who has been recruited as National Merchant Sales Manager to develop the existing relationships with merchant and Business Development Managers. Lance has worked for Bosch for over three years and will also continue his current role as Commercial Management and Team Co-ordinator.



Lance Blackburn

Richard Rhodes joins Bosch as Commercial Technical Manager for the North region. With over ten years' experience in the heating industry and being consistently one of the top performing salesman in previous roles, Richard will be responsible for driving sales within the commercial heating market within this region.



Richard Rhodes

Geoff Hobbs, our Business Development Director said: "As the Bosch brand goes from strength to strength in the commercial and industrial sector, it is imperative that we do not stand still and constantly look at ways to build on this momentum. These new appointments will help us to further strengthen the presence of the Bosch brand, not to mention offering our customers a wealth of technical expertise.

"We are excited about what the future has in store for the Bosch brand in the commercial and industrial heating sectors and wish Bryan, Lance and Richard every success in their new roles."

Specially produced for industrial and commercial M&E contractors, consultants & specifiers

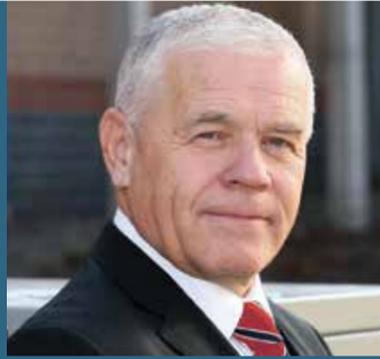
Bosch

Commercial & Industrial Heating

Bosch provides the complete industrial solution.



BOSCH
Invented for life



Welcome to the latest edition of the Bosch Newsletter, which comes at a time when the industry is bracing itself for its peak period.

Our cover story this month highlights a standout installation in a dairy plant in Schluchtern, Germany, showcasing the offering now available to the UK marketplace.

We also outline a successful installation we have recently completed at Charter Brook House in Blackburn, Lancashire. The installation allowed us to bring together multiple technologies from our growing portfolio to form an intuitive district heating system, to alleviate fuel poverty concerns for residents.

Having introduced our range of steam boilers in our last issue, this edition of Bosch CI sees us update you on some of the key projects here in the UK. Turn to page three to read more.

This issue also sees us draw our attention towards the design of Combined Heat and Power (CHP) systems, which are becoming increasingly complex as consultants and contractors continue to get to grips with this technology.

Finally, it is with a great sense of pride that I am able to confirm our status as Pipe Center Supplier of the Year. This accolade is testament to the hard work of everyone associated with the Bosch Commercial & Industrial Heating brand, and we are all proud to have been singled out for our performance by one of our key industry partners. Turn to page seven to read more.

We hope you enjoy the magazine.

Geoff Hobbs
Business Development Director

Modern energy concept with four-pass boiler

Having detailed the reasons behind our decision to introduce a range of steam boilers to the UK in the summer edition of our newsletter, this month sees us detail one of a number of impressive projects we have completed on the continent.

The origin of Immergut GmbH & Co. KG goes back to 1883 when the dairy producer was founded in Stavenhagen, North Germany. A process factory was later established in the town of Schlüchtern in Hesse, Germany 11 years later. There, the dairy processes around 45 million kilograms of milk and approximately 25 million kilograms of soya milk every year to create a range of soft drinks, refreshments, yoghurt drinks and desserts.



The Project

Since 1970, the dairy plant in Schlüchtern has been putting its trust in boilers from Bosch Commercial and Industrial Heating for the production of process steam. The steam is mainly used for sterilisation within Immergut's production process.

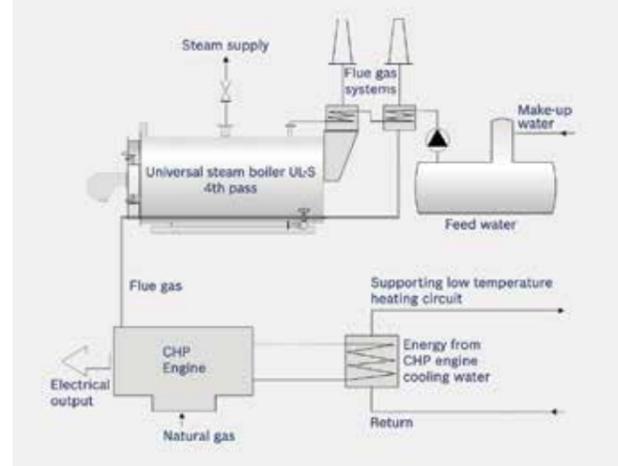
Following a comprehensive site analysis, a new energy concept was implemented in collaboration with the mechanical engineering contractor Helmut Herbert GmbH

& Co. The required energy is supplied by our combined heat and power (CHP) modules for on-site power generation. The downstream waste heat boiler that self-fires converts the waste heat, which accumulates from the engine, into process steam via its additional fourth smoke tube pass.

To further increase efficiency, a separate flue gas heat exchanger is connected downstream of the smoke tube pass. The fourth pass and the heat exchanger reduce the flue gas temperature of the CHP unit from almost 500°C to approximately 118°C, generating an additional output of 240 kilowatts. A further peak load boiler was not required due to the use of a purpose made self-firing 4 pass boiler. This allowed investment costs of the plant, space requirement and expenditure on the equipment to be reduced accordingly.

The low temperature waste heat from the engine cooling circuit is discharged into a buffer vessel and used to heat the building whilst providing domestic hot water. The waste heat arising from the power generation is almost completely recovered and reused. In addition to the self-fired waste heat boiler with a fourth smoke tube pass, the system also includes modular components from Bosch Commercial and Industrial Heating for water treatment, heat recovery and controls. This provides the heating system with even greater energy savings and increases reliability.

System diagram of CHP unit and self-fired four-pass boiler combination at Immergut



The Result

On-site power generation from the CHP unit, in conjunction with waste heat exploitation by the high-efficiency waste heat boiler, leads to a considerable increase in efficiency when compared with the conventional, separate electrical power and heat generation. This means that the return on investment for the project as a whole in less than six years, while the reductions in CO₂ and NO_x emissions will provide further environmental benefits.

UK update

Progress for steam in the UK

Since bringing Bosch's steam offering to the UK for the first time this year, we have already begun work on a number of high-profile projects.

September saw us begin commissioning at the New South Glasgow Hospital, the largest hospital in Europe and the largest construction site in the UK, where we delivered seven UT-M 5MW x 6 bar MTHW boilers earlier this year. We are working closely with Mercury Engineering, which is the M&E Installer for the £400m new build project.

We have also delivered two UL-SX IE 22000kg/hr x 22 bar superheated steam boilers to Cofely – GDF Suez, at Humber Energy Powerstation. Here, we oversaw the offload and positioning before mounting the superheaters, flue dampers, gables and safety equipment and will soon begin panel wiring and pre-commissioning.

Furthermore, we have already delivered two of the three UT-L 34.5MW x 6 bar LTHW boilers we are supplying



to Warwick University, which are fitted with stainless steel standalone economisers. Emcor ES is the main contractor on this project and we will soon be re-visiting the site to begin the commissioning phase.

This winter, we will also be working on projects at both the University Hospital Croydon, and Magor Brewery in South Wales. On both projects, Bosch is performing the role of Principal Contractor and is running the complete turnkey installation where we have appointed our approved M&E subcontractors and have a full time supervisor onsite.

For more information on our range of industrial boilers, call 0330 123 3004 or visit www.bosch-thermotechnology.co.uk.

Bosch calls for more **responsible CHP system design**



Pete Mills, commercial technical operations manager at Bosch Commercial and Industrial Heating; has issued a rallying call for a more responsible approach to CHP system design. The appeal follows observations that there is still a large number of electrically-biased CHP systems that have been designed to reject heat unnecessarily.



CHP Efficiency

"The number of small-scale CHP systems that have been designed to prioritise financial gains over efficiency benefits is a huge concern as the industry attempts to reduce emissions in the non-domestic sector.

"A worrying number of CHP systems are being designed to routinely reject large proportions of the heat generated, via dry air coolers. In the vast majority of cases, this should be considered poor practice as it not only reduces efficiency levels, but also hampers CO₂ and financial saving potential. In such instances, more thought needs to go into the ways heat can be used rather than wasted.

"What stakeholders must remember is that CHP modules have been developed to cater for the provision of both heat and electrical demand within a building. If the product of one of these functions is wasted, it is impossible for the system to perform to its full design specification."

CHPQA and CCL scheme

Pete Mills proposed that the Quality Assurance scheme for

Combined Heat and Power (CHPQA) should always be a goal for system designers.

He added: "Although voluntary, the Department of Energy and Climate Change's Quality Assurance scheme offers a significant number of additional benefits for CHP investors. Those with small scale schemes where heat is not rejected can benefit from further savings through the Climate Change Levy (CCL) exemption, access to Enhanced Capital Allowances, and metering arrangements to monitor the quality of the scheme.

"The UK industry has learnt a number of lessons since the adoption of CHP technology, but what we need to remember is that the technology has the potential to offer some of the most cost effective CO₂ savings, as well as a secure electricity supply. As with any low carbon technology however, these benefits are subject to responsible design, installation and operation practices."

For more information on our range of CHP modules, customer support packages, or to book a free feasibility study, please call 0330 123 3004 or visit www.bosch-thermotechnologies.co.uk

The launch of our new **CIBSE accredited** training courses

We are pleased to announce that our Combined Heat and Power (CHP) training programme has been granted a Continuing Professional Development (CPD) approval by CIBSE.



About the course

The new training course, aimed at consultants, contractors and specifiers, covers a multitude of CHP topic areas including the principles of CHP, sizing, typical applications, potential CO₂ savings, legislation incentives, installation requirements, service and maintenance and many more.

As a result of our CPD course provision, we will now be included in the CIBSE directory of CPD course providers. Attendance at our training course will count towards a delegates CIBSE CPD requirement.

Flexible training

The half day training course can be held at the client's premises and can be tailored to meet exact requirements. The training course can also be arranged at our dedicated training and assessment academy at Worcester, where we have a working CHP, as well as in Wakefield and West Thurrock. All courses are conducted by CHP experts and comprehensive notes are provided.

Geoff Hobbs, our Business Development Director said: "The emergence of new demands and technologies within

the commercial heating and hot water industry means it's essential to develop new professional competencies. Our CPD course will enable us to offer contractors and specifiers a structured approach to learning including essential knowledge, skills, and practical experience.

"Our commercial technical training officers have many years' experience as heating technicians and can deliver first-class training on all areas of Combined Heat and Power."

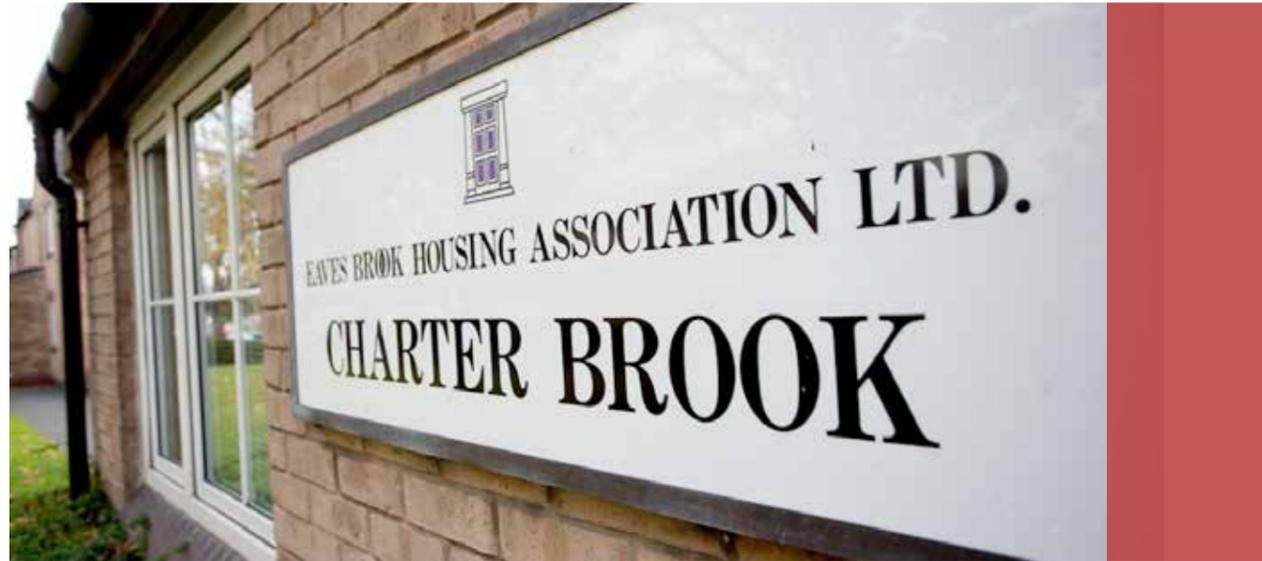
Contractors, specifiers and consultants wishing to confirm their place should call our training department on 0330 123 0166 or email training@uk.bosch.com.

The course covers a broad spectrum of topics including:

- Sizing and design considerations
- Remote monitoring and maintenance
- Legislation
- Incentives
- Savings calculations

District Heating Case Study: Charter Brook House, Blackburn

With fuel costs at an all-time high, it is now more important than ever before to ensure a heating and hot water system is operating to its full potential. Charter Brook House, a retirement sheltered housing accommodation in Blackburn, was seeing its electricity costs spiral out of control due to an ineffective and ageing heating system.



The Project

Traditionally, Charter Brook House has heated each of its 49 flats through the use of electric storage heaters. While storage heaters do have their advantages, such as minimal maintenance requirements and the flexibility of being able to be sited in areas where natural gas distribution systems are not available, in the circumstance of Charter Brook House, the disadvantages far outweighed the advantages.

The biggest disadvantage to the residents was that the storage heaters could only heat with energy stored from the previous night. Consequently, if the system was switched off, or if the charge control was set too low, there may not have been sufficient energy to heat the rooms, and this could only be corrected the following day. This proved a problem when the weather turned cold unexpectedly. Some heaters alleviate this problem by allowing heating during the day, but this is typically expensive because the electricity is charged at full rate. Even under the best of circumstances it can be difficult to accurately judge how to set the thermostats. For example, setting them too low overnight can cause the heater to be having no perceived effect, while setting them at maximum will increase their running costs.

With this in mind, Charter Brook House decided this was the opportune time to overhaul the existing heating system

with one which would prove more energy and cost efficient, whilst enabling each resident to monitor and control the mains pressured heating and hot water system.

After our technical department carried out an initial feasibility study, it was felt the best solution for Charter Brook House's operational performance was to install a communal renewables-based district heating system. Through the use of our Heat Distribution Units (HDUs), each end user could have access to on-demand heating and hot water, meeting their individual requirements. The decision was also taken to incorporate solar thermal technology, which not only enhances potential cost savings and energy efficiencies, but can also allow each HDU module to operate at a reduced flow temperature, allowing the renewable element to have an increased effect.

The Result

Working with Concept Heating, who were commissioned to design and install two centralised plant rooms, each consisting of two 100 kW GB162 condensing boilers and 16 solar thermal collectors. The pair of centralised plant rooms was accompanied by HDU modules fitted in each of the 49 properties.

Paul Flanagan, UK Sales Manager for the North, said of



Products supplied by Bosch:
2 x 100kW GB162
16 x Solar Thermal collectors
49 x Heat Distribution Units

the installation: "Whilst one of the most effective ways for a housing association to reduce long term expenditure is to invest in a new heating and hot water system, replacing one which is more than 10-15 years old, it should not be assumed that like-for-like replacements are the best option. The utilisation of renewable heating technologies, that work in conjunction with a condensing boiler system to maximise efficiency, are becoming a more effective solution for social housing applications.

"We are also seeing solar used by social housing providers and housing associations looking to combat fuel poverty for residents. The rising cost of energy has seen a number of organisations struggle to offer affordable

heating and hot water, which is a problem we also see in the domestic sector. Solar thermal is, quite rightly, viewed as a cost-effective way to alleviate fuel poverty and reduce the impact of rising energy costs for elderly residents in particular."

Rising energy costs remain a large concern for housing associations which accommodate the elderly. Solar thermal installations represent a worthwhile investment and highlight how simply the collectors can help achieve savings in both fuel costs and carbon emissions, which instantly offer payback through reduced demand from the boilers.

Achievement

Bosch named **Pipe Center Supplier of the Year**

We are delighted to announce that Bosch Commercial & Industrial Heating has been named Pipe Center's Supplier of the Year.

Having been assessed by Pipe Center, we have landed the accolade based on our performance across a number of categories, ranging from branch and sales leads support, to product marketing activity and new product development. The result of the overall assessment saw us score higher than any other Pipe Center Supplier.

This is a tremendous achievement, and has been the result of some extremely hard work throughout the business over the last twelve months.

Geoff Hobbs, commented: "This is fantastic news for our business, not least because of Pipe Center's status as the leading supplier to customers in the commercial and industrial building services industry.

"Topping the supplier rankings is the culmination of a year on year improvement in our overall standing. Everyone associated with the business is extremely proud of this achievement, and we look forward to building on our fruitful relationship with Pipe Center in the months and years to come."

