

# impressive

ISSUE 2/2020

## Three. Two. One. 4.0!

The Paper Industry and digitalisation.  
In opposition to each other?

## Edges in focus

Edge problems in the forming and press sections

## CO<sub>2</sub>-Emissions halved

Reduce energy consumption, protect the environment



03

## „When you call the Fire Service, you expect to see professionals“

Interview with Peter Michels

08

## Three. Two. One. 4.0!

Paper Industry and digitalisation

12

## Edges in focus

Edge problems in the forming and press sections

14

## CO<sub>2</sub>-Emissions halved

Reduce energy consumption,  
protect the environment

17

## When the shoe presses

Atrojet.T – Making tissue at the highest level

18

## Together without limits

Co-operation between Heimbach and Yamauchi

20

## In profile

Four „Heimbachers“ introduce themselves

22

## Have a say, participate, move

Careers with Heimbach

## Imprint

### Publisher

Heimbach GmbH  
52348 Düren  
Germany

Phone.: +49 (0) 2421 / 802 0  
Fax: +49 (0) 2421 / 802 700  
email: [info@heimbach.com](mailto:info@heimbach.com)  
[www.heimbach.com](http://www.heimbach.com)



*Dear Readers,*

*There is no instruction manual for what we have been experiencing in the last few months. These are times characterised by improvisation skills, inventiveness and steadfast perseverance.*

*But difficult circumstances can also offer opportunities, to rethink structures and business models, for example, or to reflect on your own goals and to position yourself more clearly.*

*We did this last year. Heimbach is, and continues to be, the expert for everything to do with clothing. So our main focus remains fixed upon how we can help improve your production and our products. We want to understand your processes better than ever and be on site as quickly as possible when things are not going so smoothly.*

*Let's look to the future with optimism. As the saying goes so nicely: The future is something wonderful. Most of it is still not done.*

*Sincerely yours,*

Peter Michels

Managing Director

# „When you call the Fire Service, you expect to see professionals“

## Interview with Peter Michels

**So far, 2020 has been exceptional in every respect. What we have experienced in the last few months has turned everything upside down. What question would you choose to begin this interview?**

Hmmmmm, fascinating. I think that readers are interested in the current situation at Heimbach and how we are starting the second half of the year.

**Okay, so how is the current situation at Heimbach? How do you rate the future outlook?**

The answer is good – to both questions. Granted, Corona caught us cold too. But our European locations producing paper machine clothing in Germany, England, Spain, Belgium and Switzerland have

continued to produce for the most part without major interruptions. Fortunately, our Chinese plant in Suzhou, which primarily serves our Asian customers, was able to return to normal operation quite quickly. The international structure of Heimbach Group has proven itself in such a difficult situation and offers a good spread of risk.

It was also, however, very important that in the past we had focussed very heavily on doing our homework and preparing ourselves for competition in a sustainable manner. In this way, nothing is able to throw us off track quickly.

**Are you referring to the cancelled merger with AstenJohnson last year?**

Correct. Although we didn't spend long regretting this decision. We immediately

went back to our core strengths and competencies. Basically, Heimbach continues to pursue the same goal: A clear and unwavering focus on the needs of paper mills in the area of paper machine clothing. Heimbach is, and will remain, the clothing expert par excellence. Our expertise is unique. I can say without exaggeration: The depth of our Know-how and our many years of experience are without parallel in the industry.

**You speak of unique expertise. Could you explain that in more detail?**

From daily discussions and interactions with our global customers, we know exactly where the paper industry is being squeezed in terms of clothing. These involve a lack of resources in case of trouble or problems, and requirements for fast supply when the





*Production processes optimised thanks to TASK and HOME service*

fires are burning. When you call for the fire services, you expect to see professionals. It is the same with Heimbach. No one is there faster than we are, and we can bring

a solution for a problem just as quickly. After all, everyone at Heimbach tends to have above-average qualification for their role. Our experts are authoritative with practical knowledge in every situation. This is because we want to do much more than just sell. We consider advice on the optimal use of our clothing to be every bit as important. Heimbach's overriding goal is always the same: to continuously improve our customers' paper production, and our products, together. On every machine.

Our customers know that they can always rely 100% on Heimbach, and not only when there are problems. In order to provide this security, we are constantly expanding our range of services.

**No-one is there faster?**

Yes. I realise that this may sound presumptuous, but it does correspond to reality. In the form of our TASK team, we have a responsive trouble-shooting force in use all over the world. All of them are highly qualified and experienced paper and mechanical engineers – always on call.

With our specially designed measuring equipment, custom-built diagnostic techniques and the analytical instinct of experienced professionals we help, advise and support faster and more effectively than anyone else.

**Competitive pressure means pressure on development. Paper has never been more impatient. What innovations can paper mills expect from Heimbach?**

As a family business with more than 200 years of tradition, you can only survive in the face of global cut-throat competition by reflecting on your own strengths and adaptability. One of our strengths, for sure, is that we regularly develop our own products and carry out basic research.

We maintain a number of competence centres across Europe, where we continuously improve our products. Feedback from our customers, and close monitoring and analysis of products that have „run“, give us the data and information that we need as we work to deliver even better machine performance. Forming fabrics in Manchester, Press felts and Belts in Düren, Dryer fabrics in Spain.



*Nip profile measurements provide clarity*



## Our Centres of Competence



Press felts in Düren, Germany



Dryer fabrics in Burgos, Spain



Forming fabrics in Manchester, England

At Heimbach we are constantly developing new solutions offering added value. In the case of press felts, our clear focus is on Multi-axial technology. We are already an international leader in this segment, and we will invest even more in our „New-Tech“ press felts, Atromaxx and Atrojet. In the area of forming fabrics, our focus is on our star product, Primoselect. The products referred to above have equally impressive references on graphic grades as on packaging papers.

**First, things turn out differently. Second, never how you think. In turbulent times**

**such as these, is it possible to still plan for the long term?**

Absolutely, you just have to. There are a multitude of studies showing that companies taking a long-term, sustainable approach are more successful, and at the same time less susceptible to unforeseen changes. This is also my experience at Heimbach. It is also why we are sticking with our investment plans for this and the coming years. A notable example is the continued expansion of our plant in Suzhou, China. We will invest a further 20 million Euros in the coming

years to enable us to be even quicker in meeting Asian demand. This will, incidentally, significantly reduce our transport and logistics costs. So the figures don't just work out economically, the investment also pays off for the environment.

Another strategic goal is our transformation towards Industry 4.0. In cooperation with the Rheinland-Westphalen Technical Institute in Aachen the first tests are now running in Düren. Through the computer-aided extension to reality or error perception, Augmented Reality, we expect additional quality and process improvements. And the speed with which we are able to deliver our goods will be given a further boost by the fourth generation of digitalisation, a highly exciting topic that we will certainly continue with. (Editor's note: Please see also our article on Industry 4.0 at Heimbach on page 8).

**Home Office. That is definitely the phrase of the year. How is Heimbach dealing with this form of working?**



Factory in Suzhou, China

**Has it had a big impact on procedures and processes within the company?**

I once heard the saying: Far nearer. I think that describes the situation with us very well. Clearly the impact of Corona on the world of work was a big surprise, but luckily, we were actually quite well prepared for it.

In 2019 we invested extensively in the expansion and modernisation of our IT. This included software-based resource planning, a new cloud solution and improved options for telephone, video and web conferences. For this reason, the increased and cross-location work from home did not have a negative impact on us at all. On the contrary, it showed us many new ways to communicate with each other - and with our customers – efficiently and with even more flexibility.

**The crisis as an opportunity?**

In this case a clear yes.

**In the public sphere it seemed like there was only one topic in 2019, climate and nature protection. Now in 2020 we hardly hear about it any more.**

**What would you have to say to anyone who is concerned that the fight against climate change is now off the table?**

I would say that nothing is off the table with us. On the contrary, the topic still has a high level of priority at Heimbach. As a partner to the Paper Industry, a clean and functional environment is vital to us. Without intact forests and water cycles there is, quite simply, no paper. Just a few years ago, we expanded our Chinese location into one of the most energy-efficient companies in the entire industry. Also, at our headquarters in Düren, we are demonstrating by means of a new energy concept how intelligent measures can reduce CO<sub>2</sub> emissions by half even during ongoing operations (Editor’s note: Please see also our article on page 14). Wherever we can, we

turn all the levers towards greater energy efficiency. If you are interested in our various environmental measures, we will provide detailed information with our Sustainability Report this summer. Even without the pressure of the media and politics, we at Heimbach will stay on top of things when it comes to environmental protection.



Peter Michels

©Schmitter, Aachen



## Three. Two. One. 4.0!

*The Paper Industry and digitalisation. In opposition to each other? Not necessarily. Those who recognise the opportunities offered by digital progress and tap into them on a consistent basis will achieve greater effectiveness and higher quality. At Heimbach in Düren we are testing early solutions with Industry 4.0 Manufacturing. How can we optimise product quality with visualised error prevention routes and machine blogs? How to contribute to an even greater level of machine efficiency for our customers? What possibilities does the "Internet of Things" also have to offer to us? We are in the process of exploring all this – for ourselves as well as for you.*

### **Industry 4.0 –**

#### **What does it actually mean?**

Virtually everybody will have heard of Industry 4.0 by now. The same goes for the Internet of Things. But even though both terms have been on everybody's lips for some time, not everybody has a concrete idea as to what they mean. What is essentially meant here is the intelligent and sustained association and interconnection of machines and mechanically-operated processes. The Industry 4.0 methodology is intended to both reduce operational errors and



increase efficiency and productivity. In order to achieve this, numerous approaches from information and communication technology and production are brought together. In a perfect manufacturing situation, all systems exchange data with their relevant partners – e.g. machines, suppliers, customers, logistics, quality control and service – at all times. What we are speaking of here, therefore, is computerisation.

**All well and good. But why 4.0?**

Because the current merging of the real and

digital worlds already represents the fourth Industrial Revolution. Before it we had the first Industrial Revolution in the 18th century. The steam engine changed an agricultural society into an industrial one. The second Revolution began at the end of the 19th century when electricity and mass production emerged – for example in the factories of Henry Ford. In the 1970s a third Industrial Revolution started. This phase is characterised by IT and further automation due to electronics. And now we have 4.0.

**A concrete example**

Does this still seem too theoretical and abstract? Here's a practical example: A renowned electronics manufacturer converted their final assembly line for circuit breaker housing towards 4.0 some years ago. As soon as a housing reaches the final assembly the ERP (Enterprise Resource Planning) system transmits the order data directly to the plant. After a quality check via an integrated camera the machine reports and removes products with defects. This interconnection reduces setting-up times per order to a sixth.

### First steps at Heimbach

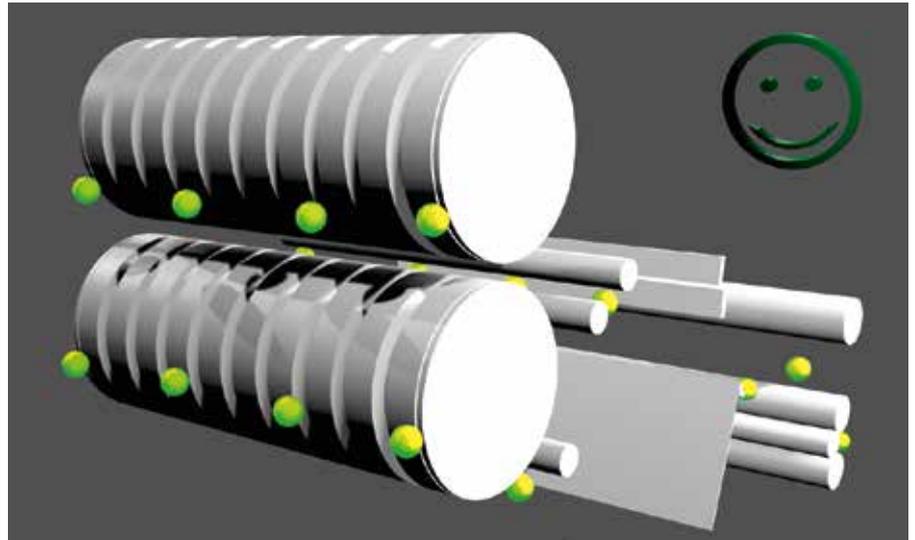
The best design, the best material, the best mechanics, do not stand a chance against production processes, products and business models with integrated data intelligence. As a traditional manufacturing company we are in full agreement. We therefore started exploring the potential of Industry 4.0 for the first time last year, with the aim of refining our manufacturing and business processes at Heimbach. In this project we are supported by the RWTH (Rheinisch-Westfälische Technical University) in Aachen.

Our first steps in what was, of course, uncharted territory for us were to focus on the visualization of frequently occurring defects and developing relevant error prevention routes through our colleagues. One of the goals was collating, integrating, displaying and using the wealth of experience of our employees. In connection with this an information exchange on the machine and in shop floor meetings should be initiated, or the transparency of existing meetings of this kind should be increased. At the end of this process we aim to introduce comprehensive systems for root cause analysis and presentation and to firmly anchor the exchange of expert knowledge on site.

### Recognise and exorcise errors permanently



Assistance system for fault location on the machine drive



Locations of errors on a weaving loom

Initially, and taking avoidably contaminated products as an example, frequently occurring errors were made visible and the relevant steps towards prevention were worked out. The latter include answers in graphic form to the following questions:

- What does the error look like?
- What is the cause?
- How can I contribute to error prevention?
- What is the benefit for us and for our customers?

Web blogs were also set up on the machines. In these, anomalies and corrective measures are documented by our colleagues and the know-how is made transparent and exchanged. In this way our web blogs also

serve as electronic memos for the discussion of problems and shift handovers. The machine operator has five info terminals to access the blogs and the stored expertise at any time. The attractive visual representation of the information mattered greatly to us in terms of both digital natives and old hands.

These are our initial steps towards intelligent production. Online consultations with our production teams have already confirmed a definite plus in terms of the transparency of information in the right place. The collated insights also provide an important basis for further immersing ourselves in a widespread representation of experience – augmented reality. Consistently improving our product quality by means of Industry 4.0 enables us to achieve even higher levels of product performance at our customers.



Supported by the German Federal Environment Foundation DBU 34602/01-23

# Research for the environment

Research and development do not only exist on paper at Heimbach. We regularly co-operate with renowned regional institutions, and not only in order to improve our products. Long-term contribution to a clean environment is equally important to everybody in the company. After all, acting for the protection of resources and the environment is firmly rooted in Heimbach's guiding principles.

Last year our textile engineers put themselves at the service of science by forming a research team in collaboration with the Universities of Aachen and Bonn. They have been researching biologically-inspired surfaces for years. Among other things, both universities are developing new configurations for removing oil from inland waters.

Nature is the driver. In order to protect itself it is able time and again to create highly complex structures with a wide range of functions. To give one example, the joint project examined what characteristics aquatic plants bring to bear on separating oil from water. The microscopes were focused on the interrelationships between strongly water-repellant and water-adherent surfaces. The result of long days in the laboratory: Oil can be selectively extracted from



Surface structure of the aquatic plant, *Salvinia molesta* (© W. Barthlott, University Bonn)

contaminated water using plant surfaces. The research results form the basis for new textile materials with which water can be ecologically treated.

Once again it has been shown that science and environmental protection often go hand in hand. And with Heimbach, wherever possible, at the forefront.

Contact person for  
Research and Development

**Prof. Dr. Kai Klopp**

Phone: +49 (0) 2421 802 434

email: [kai.klopp@heimbach.com](mailto:kai.klopp@heimbach.com)



Drops of water on the leaf of a *Salvinia molesta* plant (© W. Barthlott, University Bonn)

# Edges in focus

*Edge problems in the forming and press sections can often cause confusion amongst those responsible. TASK is there to resolve such problems. Paper production stopped being taken for granted a long time ago. It is not only the dryer cylinders that are under pressure, the factories themselves are too, so the last thing manufacturers need now is costly disruptions to production and loss of quality. Edge problems in the pick-up position are a persistently annoying issue. The specialists in our TASK team are very familiar with this, having similar experiences time and again around the world: Even small adjustments can eliminate gremlins in the long-term.*

## Effects on the whole process

The causes for complications in production are as diverse as the different grades of paper. One of the reasons why customers often seek our help is the incidence of edge problems.

One common edge issue occurs when the paper web, or the trimmed edge of the sheet, begins to be carried along with the pick-up felt. As soon as this defect moves into the press rolls, all subsequent groups/sections are prone to sheet breaks. It's a classic situation: The trim from the fabric or parts of it follow the pick-up felt. The sheet edge remains stuck to the central press roll and tags along or breaks.

This results in edge damage, edge creasing or folding of the edge.

## Sensitive pick-up position

Minor cause, major impact. This ubiquitous saying applies equally to edge problems. This chain reaction occurs mostly in context with the pick-up position.

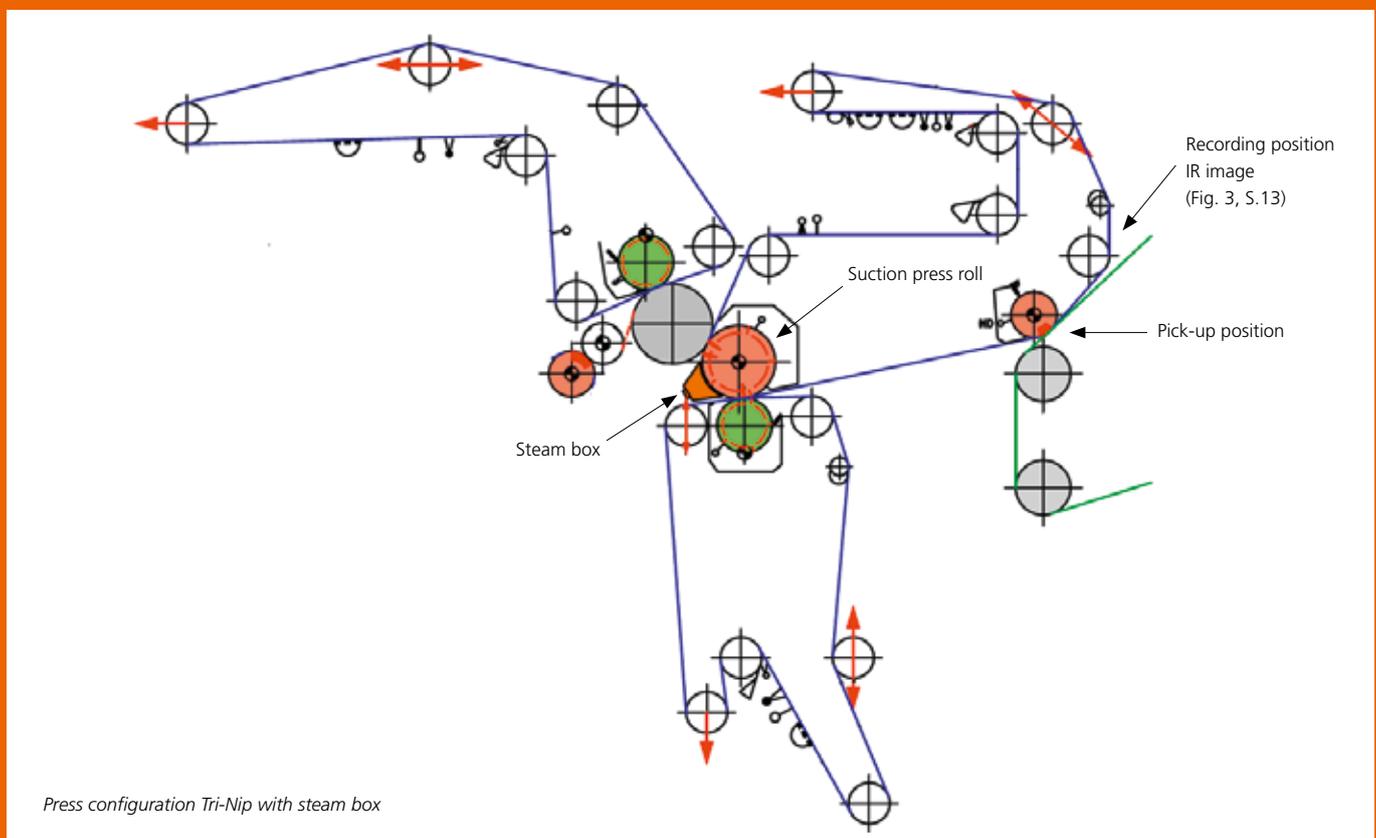
When troubleshooting, our attention is initially focused on this position and the related clothing. We find that in most cases the surface of the felt is dirty, or even fused, and therefore smooth. The smoother the felt surface, the more the sheet tends to adhere to, and then run with it (glass plate effect). How is it possible for the pick-up felt to change so much? The causes would tend

to be incorrectly adjusted suction elements, inadequate suction box design and too high temperatures due to a steam box.

Let's take a closer look at these weak points now. And find out how our TASK colleagues have been able to help in the following cases.

## Correct setting of the suction elements

Encountering edge problems after only two days of operation – our customer was rightly surprised. Regardless of who supplied the felt, every time a new one was installed, the sheet followed the felt and folded in the press.



Press configuration Tri-Nip with steam box

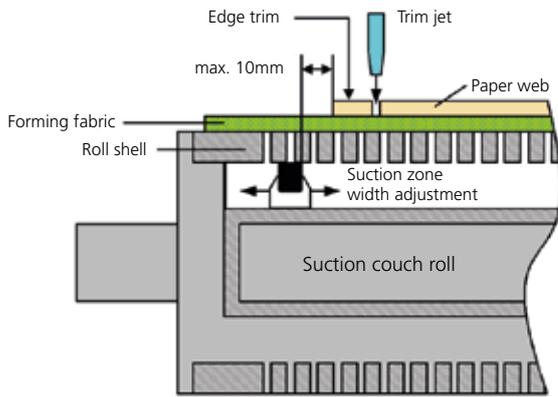


Fig. 1: Suction couch roll with optimal width adjustment of the suction zone

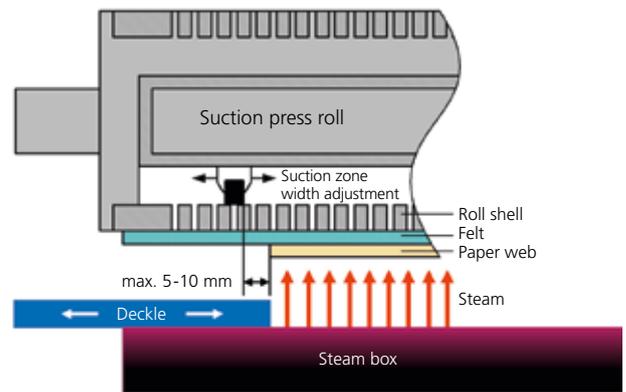


Fig. 2: Suction press roll with optimal width adjustment of the suction zone and optimal width adjustment of the steam box

A series of investigations cast some light on the subject. We examined the dry content of the trim, the edge deckles of all suction chambers in the forming and press sections as well as the steam blow box. Measurements of the moisture content of the individual sections were followed by felt permeability analysis. This involves injecting pressurised water into the felt and measuring the flow rate.

All the checks, investigations and analyses led to the following diagnosis: The edge deckles of the suction chambers in the suction couch roll and suction press roll were not in the optimal position. This resulted in low dryer content at the sheet edges and subsequent following of the trim. In addition there was unequal load distribution of the first press on FS/DS.

These findings and the recommendations for optimisation from our colleagues in TASK enabled fast and precise corrections of all relevant settings. The machine has been running without problems ever since.

#### General advice:

For optimum suction at the sheet edges, suction box deckles should be set to ca. 5 – 10 mm outside the paper sheet and permanently aligned with the sheet width. In order to protect the fabric edges from excessive wear, the suction box deckles should be slightly offset against each other in the forming section (Fig. 1).

#### Targeting the steam box

Our next case concerned a high-speed paper machine. In the case of fast running machines steam boxes are often used to increase production or to correct profiles. However, operators frequently complain about edge problems, an issue that in most cases leads to the need for an early removal of the pick-up felt.

There is no doubt that an increase of sheet temperature results in improved dewatering, but this is often achieved at the expense of the pick-up felt. The escaping hot steam is pulled into the felt by the suction press roll. The felt edges heat up and the fusion of the surface that we referred to above occurs.

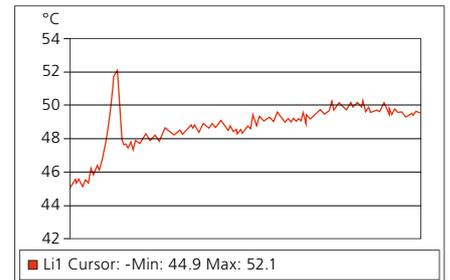
Such thermoplastic change of the material is often increased further when a steam box is too wide and/or suction press roll deckles are set too wide.

All the above problems had occurred in this case. The analyses of our TASK colleague showed: The width settings of the discharge and suction zones were not ideal. Movable edge deckles at the steam box as well as an optimum setting of the edge deckles at the suction press roll can remedy the situation.

Our infrared images showed temperature peaks of up to 10°C higher in the critical edge area (Fig. 2). As in our first example just a few simple steps were enough to eliminate the causes of the production problems.



Fig. 3: Temperature peaks around the edge zone



Our work in paper mills regularly shows that details do matter. We are always very happy to talk to you to find out which of these apply to you personally.

#### Georgi Slawtschew

Phone: +49 (0) 2421 802 466

email: georgi.slawtschew@heimbach.com





## CO<sub>2</sub> Emissions halved

*Reduce energy consumption, protect the environment – these have been key commitments for Heimbach over a long period of time. The Suzhou site in China is one of the most up-to-date and energy efficient production facilities in the entire paper sector. Bolstered by these positive experiences, we took the decision last year to update our Düren headquarters in terms of energy optimisation, with the aim of halving our CO<sub>2</sub> emissions.*

Environmental sustainability has long been a deeply rooted concept in the paper industry. For many years great efforts have been made to maintain an intact nature: guarantees of origin, conservation of resources, recycling, renewable energy. By means of new systems engineering, process optimisation and energy policies, paper makers could even be described as leading players in the transformation of industry towards sustainable production. Heimbach too has been around the block once or twice in terms of environmental



*Shop floor in Suzhou*

protection. Making every effort to save energy is a constant focus for us. One of many examples is the production site established at Suzhou near Shanghai for forming fabrics, press felts, and dryer screens. Even before construction began we were determined to create one of the most energy efficient production facilities in the industry with an “intelligent” building automation system. As a result, the entire building can be heated with the process heat of a single calander, only ever using the exact amount of energy that is required.



Tank installation



Oil/hot water heat exchanger

Reduce costs, protect the environment – this worthwhile equation was refined even further last year at Düren. Already certified with an energy management system according to ISO 5000 and operationally effective, we invested significantly in the energy modernisation of our headquarters during 2019.

### Waste heat becomes useful heat

From the beginning, we set a great challenge for the new energy project: The CO<sub>2</sub> emission from our gas consumption was to be halved and 2,000 tons of carbon dioxide would be saved. The concept is based on heat recovery and thermo oil integration. Initially budgeted at one million Euros, the final cost of the project increased by an additional half of this over the course of the project. The aim is to turn off the large central steam generator during the summer months.

This enormous pressure vessel (10 MW) is now only in operation over the winter in order to heat the building. Due to the measures invested in the project, we expect to make a yearly saving of 10,000 MWh of gas energy, equating to approx. 250,000 Euros, and our electricity costs are also expected to decrease by approx. 40,000 Euros per year. And this is just the beginning. Exact figures regarding achieved and future savings will be available from this year's operation.

### Finely tuned down to the smallest detail

First, a range of cooling processes were converted from direct river water supply to a semi-closed system. Warm water is now buffered in three large plastic tanks (HBT 1/2/3, 50/40/30°C). The process is now transient and temporary. The roll temperature is reduced once from 200°C to 50°C per process. The discharged heat energy is now available to be used for heating purposes.

Decentralised, smaller heat pumps were connected to the tanks as heat sinks, in the areas of Finishing, Needling, canteen and workshop. The heat pumps with an output of 15 to 50 kW provide offices and communal rooms with hot water of 65 to 70°C – in a highly efficiently manner. This heating was previously operated by steam or by electricity alone.

Furthermore, an exhaust gas heat exchanger was connected to the thermal oil boiler. The new component operates with a recovery capacity of 250 kW and heats our process washing water to 60°C. The entire surplus capacity can now be used for the building's heating system; nothing is wasted. Finally, the calander transfer belt was disconnected from the steam supply (12 bar) and attached to the nearby thermal oil plant.

A new heat exchanger was also installed. This means that the boiler is utilised much more effectively and the stand-by losses are significantly reduced.

### Following nature. All the time.

Nature continually renews itself. We follow this example with our continued efforts for ever greater sustainability. The energy project in Düren is therefore just one step of many in our commitment to a clean environment. We will report regularly on further measures in future editions of impressive.



### Raies Arfaoui, Project Management PMC, successfully implemented the project.

We rely on the know-how and experience of our colleagues from Project Management in the planning and implementation of large projects such as energy efficiency measures at our different sites. Raies Arfaoui is a key member of this team, with an excellent and long-standing knowledge of the company.

Raies completed his machine operator training with us in 1999. This was followed by a course of study as a textile engineer. From 2009 to 2011 he took on a variety of important tasks at our Suzhou China site. Today Raies manages projects in the area of paper machine clothing across the Group.

Phone: +49 (0) 2421 802 359  
email: raies.arfaoui@heimbach.com



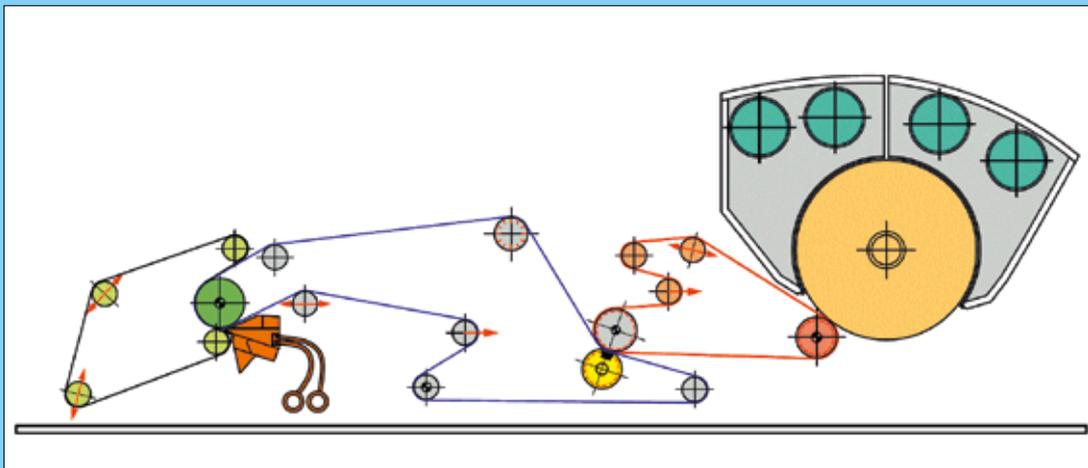
# When the shoe presses

## Atrojet.T – Making tissue at the highest level

Since their introduction in 1984, shoe presses have undergone continuous development and been in use on many machines, in at least one position, since the mid-1990's. Many modern paper and board machines are equipped with shoe press technology.

Tissue paper manufacturers also appreciate the power of the shoe press with its significantly improved drainage performance. The New-Tech press felts from our Atrojet.T product family have consistently proven their worth, in particular on Crescent Formers

with free-standing shoe presses and configurations with contact to the Yankee cylinder. Fast drainage at high operating speeds, faster start-up, optimal pressing – references that convince:



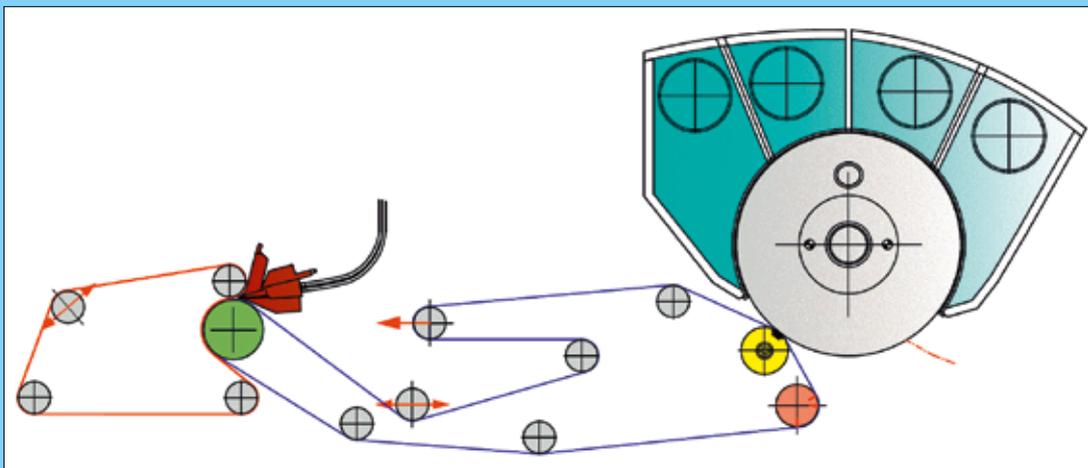
### Example 1

#### Configuration:

Crescent Former  
Free-standing shoe press  
and transfer belt

#### Production:

Tissue, pulp  
16 – 24 g/m<sup>2</sup>



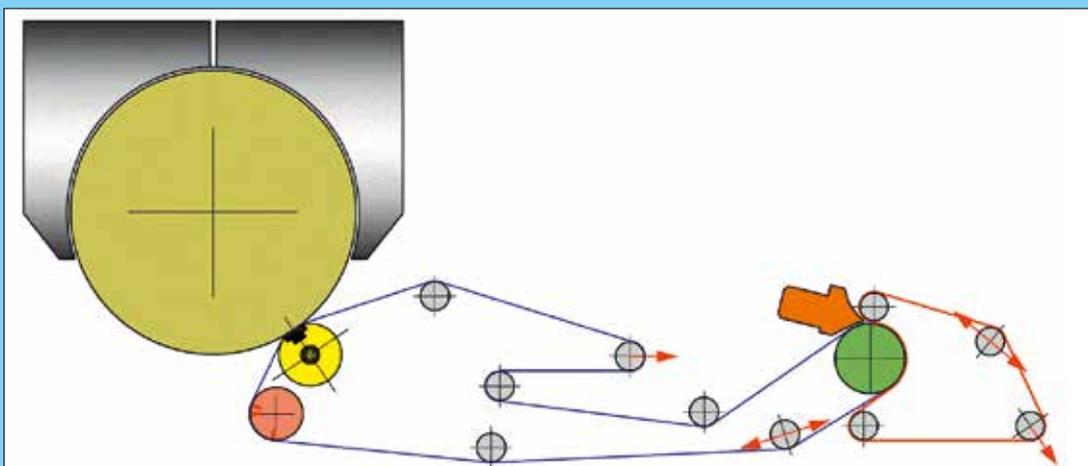
### Example 2

#### Configuration:

Crescent Former,  
shoe press against  
Yankee cylinder

#### Production:

Tissue, pulp  
14,5 – 35 g/m<sup>2</sup>



### Example 3

#### Configuration:

Crescent Former,  
shoe press against  
Yankee cylinder

#### Production:

Tissue, pulp,  
waste paper  
12 – 40 g/m<sup>2</sup>

# Together without limits

*There is an old Japanese saying: „ No road is long with a friend by your side“. At Heimbach we fully endorse this statement. It is now exactly ten years since our co-operation with the Japanese shoe press belt pioneers Yamauchi began. Together we are continuously developing the Yamabelt shoe press belt portfolio. Over this period we have taken the interaction of belt, press felt and shoe press to a new level. Never has nip dewatering been as efficient as it is today, nor the materials employed so resilient and durable. Neither party, however, has any intention of resting on their laurels. The co-operation is being consistently expanded and the products systematically improved.*



Yamauchi at Heimbach in Düren November 2019

Pooling forces does not just describe the way that a shoe press works. This practise also works perfectly when two leading technology suppliers to the paper industry combine their innovative strengths.

2010 saw the beginning of the partnership between Heimbach and Yamauchi. The decades of press felt knowhow centred in Düren and the long experience with shoe press belts from the Japanese side are the foundation blocks for the success story that has ensued.

## **Two, fitting perfectly together**

Shoe presses often present a challenge to the design of a press felt, above all when it comes to drainage in the nip. With New-Tech press felts such as Atrojet, Atromaxx and Atrocross, Heimbach has had the right solution to this problem since the 1990's... and an ideal complement to the Yamabelt product line.

Yamabelt comprises of a three layer support fabric, which is completely embedded in highly developed polyurethane (PUR).

The belt is characterised by extra smooth inner groove surfaces which, in all designs and applications, favours immediate nip dewatering. The range also includes different polyurethane combinations to emphasise specific properties or requirements.

This includes, for example, constant void volume over the entire life of a belt. With our New-Tech product family also guaranteeing the highest dewatering in the press section the technologies of Heimbach and Yamauchi go together hand in hand.

## Joint developments

With the advantages of grooved designs, there were plenty of opportunities to further optimise properties. Interrupted grooves can function as an elongated hole that could, for example, reduce or even eliminate the „backsplash“ that can occur at slower speeds. This is a wedge of water that forms on the incoming side of the press nip that can interfere with drainage or cause the paper web to compress. The advantages of doctoring can be achieved equally as well with interrupted grooves as with continuously grooved designs.

The suggest changing time to moment came in 2012: The first further development came on to the market. Following a series of analyses and trials, designers and technicians took the approach of shortening the grooves. The now „short interrupted“ designs were able to further improve the doctoring effect as water remaining in the grooves is removed.

An additional benefit saw the pattern of machine direction interruptions distributed more evenly across the surface of the belt, which in turn created more even pressure transmission in the nip.

*Meeting in Asia February 2020*



*Yamabelt installation*

## Load limits re-defined

Shoe press belts run constantly under high pressure. This will not be changed by the technological improvement of the shoe presses themselves. The interfaces at both edges of the shoe, between existing and non-existent line force, put continuous pressure on the polyurethane belt surface. This manifests itself in hairline surface cracks. In addition, the material still has to withstand the permanent load caused by tensile stress in the cross direction and the centrifugal forces acting in the running direction over the entire surface of the belt. And all of this at high speed, millions of times. Result: stress cracks.

The development team studied all these factors closely with a view to identifying

areas for improvement, and this commitment was well worth it. Kendo and Judo are two fundamentally enhanced qualities now available in the Yamabelt portfolio. In Kendo, the overall crack resistance of the product is significantly increased. In the case of Judo, the optimisation was specifically targeted at positions that tend to crack at the shoe ends. The Aikido version followed in 2019, a combination of proven product qualities with a newly developed polyurethane formulation. The new design meets continually rising demands in terms of mechanical load capacity.

## Plenty achieved. Much more to come.

Ever more resilient, more durable, always meeting the demands of the customer – with this claim Yamauchi and Heimbach are taking their successful co-operation into the next decade.

## Jochen Pirig

Phone: +49 (0) 2421 802 358  
email: [jochen.pirig@heimbach.com](mailto:jochen.pirig@heimbach.com)



# In profile

Many paper webs converge at Heimbach, with colleagues in Europe and Asia working together hand in hand. In this article we present four committed „Heimbachers“ to you, representing the diverse fields of activity and backgrounds of our international team.



## Oliver Beyel

Head of Product Management EMEA

### A stellar playing career

June 30, 1996. It is the 95th minute of the European Championship Final between Germany and the Czech Republic at Wembley Stadium. Oliver Bierhoff scores his legendary

Golden Goal to win a third European title for Germany. Just one month later, on August 1st 1996, the career of another committed soccer enthusiast begins at Heimbach. Oliver Beyel started his apprenticeship at Heimbach as a commercial trainee. This was followed by a degree in Process Engineering for Paper Manufacturing. With a change of clubs in the meantime, Oliver has been a reliable top player for Heimbach over 24 years and is primarily responsible for the Product Management Department covering Europe, Middle East and Africa (EMEA).

**By Background:** Commercial administrator with a Degree in Process Engineering for Paper Manufacturing

**At Heimbach:** From 1996 to 2001 and again from 2006

**Field of activity:** 5 years Regional Sales Manager North Europe, since beginning 2020 Head of Product Management EMEA

**Milestones:** Captain on the field in the interplay between successful sales and applications technology

**Motto:** „Courage to change“

**In private:** Football (nowadays more as a fan), active member of the Carnival club and remaining free time spent in garden or travelling



## Paul Tunnah

Regional Sales Manager

### The chemistry is right

A real win, whichever way you look at it: With 25 years of professional experience in the industry, including 13 years with a

chemical supplier, Paul Tunnah brought valuable know-how and deep experience to Heimbach from day one. From our UK location, the seasoned regional sales manager looks after our customers in the United Kingdom, Finland, Scandinavia, Russia and the Balkans. Over the past five years, Paul has been instrumental in the international marketing of Primoselect.

**By background:** Laboratory chemist

**At Heimbach:** At the Manchester location since 2008 with new ideas, inspiration and plenty of ambition....amongst other things Paul studied part-time for a degree in Business Management

**Field of activity:** On the road as Sales Manager for Heimbach in half of Europe

**Milestones:** A key figure in the Manchester Forming Team during the field marketing phase of Primoselect

**Motto:** „Don't always take life so seriously. Enjoy every minute.“

**In private:** Sport, no matter what kind, Paul is always interested. And as a local patriot, there could never be any doubt – his heart beats for football, and the red and white colours of Manchester United.



### Dieter Telgmann

Head of Product Development and Quality Management Pressing and Belting

#### Mission possible

In 1996, Mission Impossible was the blockbuster film par excellence. Agent Ethon Hunt is on the trail of a traitor within the CIA. The mission and half of the world are

threatening to spiral out of control. Breathtaking tension until the last minute. At the same time, Dieter Telgmann started his career with Heimbach.

His mission: everything goes, nothing is impossible. The trained metalworker and qualified Textile Technology engineer is responsible for a number of pioneering product developments at our Düren location. And as Head of Quality Management for Pressing and Belting products, Dieter will guarantee that nothing gets out of control.

**By background:** Metalworker and Graduate in Textile Technology

**At Heimbach:** In Product Development since 1996

**Field of activity:** Technology Management Pressing and Belting

**Milestones:** Project Leader for „Webmover“ transfer belt and the multi-axial non-woven Atrojet from project management to commissioning of the production plant up to the worldwide market launch

**Motto:** „Always remain open to new ideas“

**In private:** Dieter doesn't only overcome obstacles at work. Even in his free time nothing can stop him, whether on his mountain bike, or when he is kayaking or hiking. Also when he is playing volleyball or dancing, Dieter is always at the party.



### Luis Loureiro

Sales & Service Portugal

#### New, and yet an old hand

After thirteen years working with different companies in the Paper Industry, and consistent supplementary training, Luis Loureiro switched from representing Heimbach to a

directly employed position with the company last year. He is responsible for Sales and Service in Portugal.

As a soon-to-be Chemistry Engineer at the University of Beira Interior, Luis decided in 2006 to specialise in the Pulp and Paper sector. Some years ago he also enrolled in the Porto Business School, where he completed a degree in Sales Management.

**By background:** Chemical Engineer

**At Heimbach:** Since 2019, with many years of prior experience in the Pulp and Paper Industry

**Field of activity:** Sales and Service Portugal

**Claim:** Customer satisfaction is everything. Nobody knows this as well as Luis. And when great know-how from the chemical sector meets many years of sales expertise in the Paper Industry, quality service is guaranteed.

**Motto:** “Just do it – make things simple”

**In private:** Family and friends will always come first for Luis. Otherwise you may meet him out jogging or having a friendly kick-about on the local football pitch.

# Have a say, participate, move up the career ladder with Heimbach

*Heimbach could be described in many ways: a long-established company, a driver of innovation, a global player, a family-run company. But above all it is a modern employer for technophiles and ambitious people.*

It all began in 1811 in Düren in the Rhineland, which was already recognised as a centre for the manufacture of paper. Initially founded as a pure textile company, Heimbach extended its production range just a few years later with the addition of felts for the manufacture of handmade paper.

The reason for this development was the large number of paper producing companies that had begun to locate around Düren. Spotting and seizing opportunities, actively participating in change, has always been Heimbach's motto.

With our wide range of high quality clothing for paper machines we are a key partner for the paper industry worldwide. We are also a global supplier of technical textiles for numerous industries. Be it the automotive sector, food production, chemical industry, or construction – millions of people come into contact every day with products in which we are involved.

Heimbach now has research, development and production facilities at eight sites in seven different countries: Germany, Spain, Belgium, England, Italy, Switzerland and China – around 1,300 employees are

involved in a wide variety of tasks, business areas and positions with us.

## **A future through and for our employees**

When you enter our factory buildings, laboratories and warehouses you will find up-to-date machinery, technologically sophisticated production processes, and a variety of different materials. Taking a closer look you can get an idea of what we are working towards: Industry 4.0, on which we report on page 8 in this issue.

Not visible at first glance are the prospects, the multitude of job opportunities and



### **Birgit Gorissen**

*Began apprenticeship at Heimbach in 1985, becoming textile product inspector. Today is Head of Finishing Department, responsible for 90 employees.*

### **Michael Andrzejewski**

*Began training at Heimbach in 1999, becoming non-wovens machine leader. Today is Head of Needlework Department, responsible for 70 employees.*



**Kerstin Esser und Markus Gerz**  
*have recently completed their training as industrial clerks, and are now strengthening our Lean, and respectively Sales team*

exciting careers at Heimbach. We actively promote all of this. We are absolutely clear: Our employees are the backbone of Heimbach. High-tech machines and products are only as good as the people who develop and operate them, who contribute with their ideas and who look to the future together with us. This is our firm belief and we stand by it.

For this reason we invest heavily in the training and qualifications of our employees. This in turn means that the quality of this training is of great importance to us. The examination results of our apprentices are regularly among the best in Germany, at regional as well as federal levels.

A well developed system of apprenticeship programmes and in-service training guarantees the professional development of each and every member of staff. Thanks to our highly qualified employees our company is

always able to keep in step with all market requirements.

**Rethinking organisation. Self-direction.**

Working at Heimbach is strongly influenced by LEAN principles. In concrete terms this means that we as an organisation are constantly learning and developing. Rigid hierarchies would only be detrimental to this. Instead, self-organised teams, dialogue-based communication at all levels, and fostering the competence to work independently are what we need. At Heimbach following orders without thought does not exist, every single person makes decisions. Each and every job contains a variety of roles which are enacted at the right time. Instead of being static, work remains exciting and challenging.

Machine clothing and technical textiles from Heimbach are used worldwide and around the clock. This in turn means that many jobs

within the Heimbach Group entail a lot of travelling, providing ideal conditions for globetrotters.

However much we operate internationally though, we remain one thing above all: A genuine family-run company with roots and values. We never lose sight of the wellbeing of our employees. Health and family are of enormous importance to us. Clearly, therefore, this must include a first-class health management policy and a good work-life balance.

Employees who make a positive contribution to the company are looked after well in return. There are many ways to achieve this at Heimbach. Apprentices who move up to become managers of business areas are no rarity. Colleagues who return to us after having left the company often do the same.

**Come and join our team!**

Have we tempted you to start a career with us?  
 Are you looking for new challenges?

We would like to meet you!

**Take the initiative and send your job application to:**

<https://www.heimbach.com/en/heimbach-group/career/>





# Atrojet

Towards new shores – with the perfect felt

**Atrojet is the unique combination of a Multi-Axial Non-Woven module with different bases. For all paper machines, positions and grades**  
**Benefits at a glance:**

- Excellent Start-up: Even quicker with Fast Forward
- Outstanding dewatering and very smooth paper profiles
- Precise matching of modules depending upon application
- Clear reduction of shadow marking from rolls
- Highest stability and toughness
- Maximum tensile strength

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

wherever paper is made

