



# impressive

ISSUE 2/2023

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In conversation with our service experts

## Savings potential for the biggest energy guzzler

Dryer Section Audit – Part 1

## Small change, big effect

Seam felts with optimised braking aid



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## Imprint

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Dear Readers,

As you have most probably heard, Heimbach will become a part of Albany International Corp. This is a big step for both companies, uniting us to meet the ever-increasing challenges that we face. Whether it is rising energy and logistics costs, fluctuating supply chains, shortages of skilled workers or high inflation, you are all very familiar with the current headwinds.

The merger is still subject to regulatory approvals. We do, however, expect the green light to be given in the course of the second half of the year. Many of you will now quite rightly ask to know what this means in concrete terms, and what will change. Let me give you this assurance: For the time being, everything will remain the same in terms of day-to-day collaboration. Your contacts will be there for you as usual under the familiar details. Long-term partnership continues to be our most important asset. Community and cooperation between us has always been the cornerstone of our actions. And that is what we continue to stand by. Against this backdrop, we see the acquisition by Albany above all as the start of a new cooperation that will also be aimed at generations. During negotiations, the fit was important to both sides. And it does just that. The manufacturing sites, product portfolios and technologies, service and sales companies are perfect complements to each other. The result is the leading, machine-independent clothing expert in the market. Thanks to this new global presence, we are moving even closer to our customers, optimising supply chains and improving our carbon footprint.

So, if the merger should take place in the near future, this will mean above all for you: Even greater delivery capacity, service quality and advice. Until such time, we will continue to concentrate on our existing business.

I am therefore all the more pleased about this latest issue of impressive, in which we have taken a look behind the scenes and let industry experts have their say.

I wish you an enjoyable and exciting read.

Marco Esper  
Chairman of the Management Board (CEO)

# Expertise in black and white

People employed within the paper industry frequently find themselves working under pressure. At the same time there is very high demand for knowledge. We have to ask though, who has time to spend hours reading figures, infographics, diagrams etc.? In our attempt to keep you and your colleagues as well informed as possible on subjects within our area of expertise we have prepared white papers for you on a variety of clothing-related topics.

To get the very best out of your production, many components must be perfectly coordinated. This would include, for example, taking good care of the machine clothing or the careful adjustment of edge spray nozzles. Our experts have summarised the more important issues in two short guides that are easy to read.

## Felt conditioning

If you want the highest quality off the reel, it is vital not to neglect felt conditioning. We dealt with this topic in the last issue of impressive. Among other things, we advised how to operate the high pressure shower pipe correctly. The high pressure needle jet must always be laminar. Only under this condition can the energy of the jet reach the felt surface at full power. A turbulent jet that breaks up beforehand will lose energy and cannot use its cleaning power to a maximum. But this is not the only adjustment screw that you should pay attention to. **To find out how to optimise the cleanliness of your felt and thus increase lifetimes and improve runnability, read our White Paper on felt conditioning.**

## Edge Trim Installations in the Forming Section

In a further White Paper, published in cooperation with PMS, we focus on the optimal setting of edge trim shower nozzles in the forming section. For many papermakers, this is a philosophy on its own. It is true to say that the good running of a paper machine depends to no small extent on the proper functioning of the edge trims.

If the nozzles are working efficiently, this will pay off in several ways: For example, the break rate can be reduced and sheet transfer at the pick-up should remain trouble-free.



Likewise sheet drop-off and edge trims following the pick-up felt are prevented.

**By the way:** In order to assess the jet properties of the edge trim shower nozzles while the machine is in operation, it is advisable to use a hand stroboscope. For this purpose, the headlamp should be set to a flash frequency of approx. 50 to 60 Hz and flat above the fabric onto the jet of the edge trim.

**Further recommendations and tips can be found in our new White Paper Edge Shower Systems.**

Download the White Paper here!



We look forward to receiving your feedback!

## In conversation with Jass

The Jass Group is an owner-managed group of companies with five locations in Germany and Poland, employing around 800 people. The company has been making environmentally friendly paper from recovered fibres for corrugated board packaging since the 1960's. With an annual corrugated base paper capacity of around 1 million tonnes, Jass is one of the leading paper manufacturers in both Germany and Europe in its range of grades. We spoke with Dr Uwe Weiss, who is mill manager at the Rudolstadt/Schwarza site, about current and future challenges, security of supply and partnership relations.

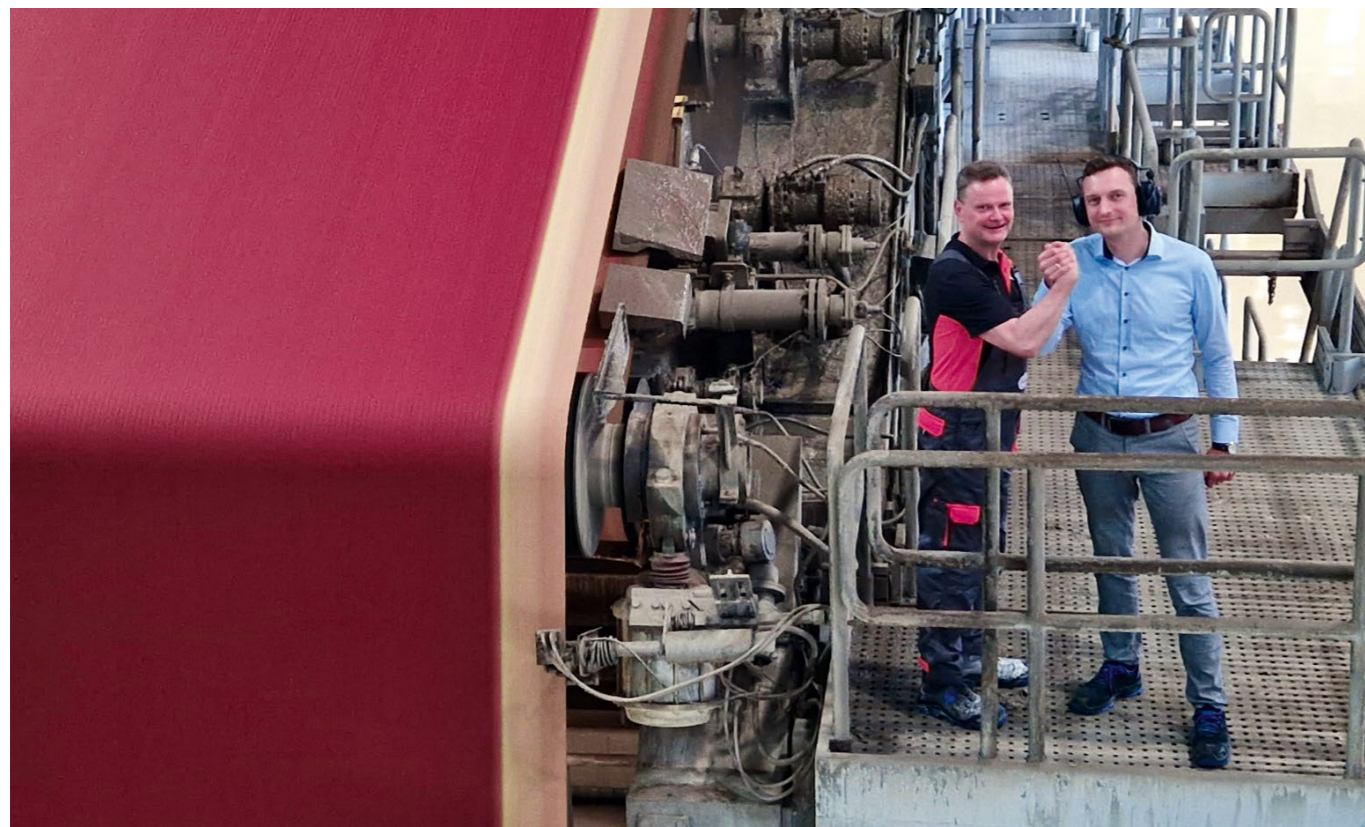
### Times are more than challenging. How does your company manage to produce efficiently under current conditions?

We rely on consistency in every aspect of machine operation. In addition to daily work on the process, this also includes continuous documentation of settings, adjustments and malfunctions. We discuss this within our weekly expert group and formulate appropriate to-do's. This does not only mean trials and in-depth investigations. For example, we use this forum to determine what is demonstrably the best clothing. In meetings with our partners, we discuss the issues that are of most importance to us, analyse any

weak points and seek to make good things even better. Every measure that comes out of this is the subject of a follow-up. Essentially, this means that for everything that we do, we are at the same time determining how we will evaluate success or failure. In this way, problematic situations can be gradually eliminated and successes are documented for future reference. This leads to sustainably good machine operation which, as referenced earlier, is a basis for efficient production.

### In the past, your companies suffered from the effects of booming e-commerce. What has changed in recent years? How do you assess future development?

E-commerce is here to stay, albeit taking different forms. There is no alternative but to face up to changing demands in this business. We are doing this in different ways. For example, we are investing in the development of new grades and ensuring that it is possible to make lightweight and super light-weight papers on our machine. There are certainly many major challenges associated with the latter. We have to manage the balancing act between the manufacturing of lightweight grades with high requirements just as efficiently as we manage the heavy qualities. And this should be achieved without a need to change clothing. Jass has always excelled at being close to



The good partnership continues: Tino Mädler (Heimbach, left), Dr Uwe Weiss (Jass Rudolstadt/Schwarza)



our customers and quickly responding to their needs. Doing this means that we must be ready to produce papers of 80 gsm, for example, at any moment. In the fast-moving world of e-commerce, adaptable suppliers count. We are very well-positioned within the Jass group and are regarded as a flexible and reliable partner.

### What is the current situation in terms of security of supply? Both in terms of raw material procurement and, in particular, with your clothing suppliers?

At the beginning of the Corona crisis, the dark side of globalisation and the worldwide supply chains associated with it became apparent. As was certainly the case with many others, we were not sure whether all auxiliary and operating materials would be available just in time. Probably applying an abundance of caution, we decided to build up reserves that would compensate for any delays. There was an expansion

in the quantity of materials that we carried in our stocks. We did not, however, make any changes in our call-off programme for stock replenishment, continuing to order them in the usual way, regardless of stocks. We would only have helped ourselves from the increased stock in the event of disruptions.

There is no doubt that two things helped us not to have to use it: Firstly, the multi-supplier strategy that we have maintained over the years for each item and secondly, the commitment of our partners. I should stress that our suppliers with raw material sources and production facilities in Europe came to the fore here.

*„At the beginning of the Corona crisis the dark side of globalisation and the worldwide supply chains associated with it became apparent ... our suppliers with raw material sources and production facilities in Europe came to the fore here.“*

**What do you place particular emphasis on when selecting clothing?**

Most important is that fabrics must function exactly as we expect them to. We do not want to encounter any unpleasant surprises in terms of quality and/or function – keyword high levels of reproducibility. Immediately after that, the psychological factor kicks in: we have trust in fabrics that we understand and internalise. Our expectations are clearly defined, and we must understand the reasons behind successes and failures alike. Last but not least, soft factors like honesty and quality of service also count for us.

**You used conventional press felts on the state-of-the-art PM1 for many years. How difficult was it to switch to New-Tech designs?**

Once it became clear to us that a changeover was inevitable, the alternative was worked out in good cooperation with Heimbach. Since this process went along entirely with our wishes, the changeover was very easy. Even minor setbacks were not able to frustrate us. On the contrary, I would say, they were an occasion to investigate the causes together and finally find the best solution. We were able to expand our process knowledge significantly, as well. With this knowhow, we are in a position to make decisions concerning a sustainable clothing strategy.

**What added value do you see from using the new multiaxial and non-woven felts?**

Firstly, we can see that the felt design can be very precisely adapted to our clothing strategy. That is a great thing, of course, as it makes targetted fine-tuning much easier. Furthermore, the lifetimes more than match our expectations. This helps give us the flexibility that is sometimes necessary if we deviate from standard cycles. Last, but not least, we can see that the felts are very dimensionally stable and also easy to keep clean. This gives us high levels of efficiency

throughout the lifetime of the felts whilst also giving us excellent dewatering performance.

**Service on call. That is what you need when a problem occurs. During the last TASK assignment our colleagues were on site 16 hours after the first call. Is this a rarity or standard?**

We had very specific problems on the machine and were in need of acute assistance. We were told „Call Heimbach, good support will arrive very quickly“. We were very pleased that the job could be done with such short notice. And we appreciate even more that we were able to achieve an excellent result together. Fortunately we could begin with a very good description of the problem. The expert guys from the

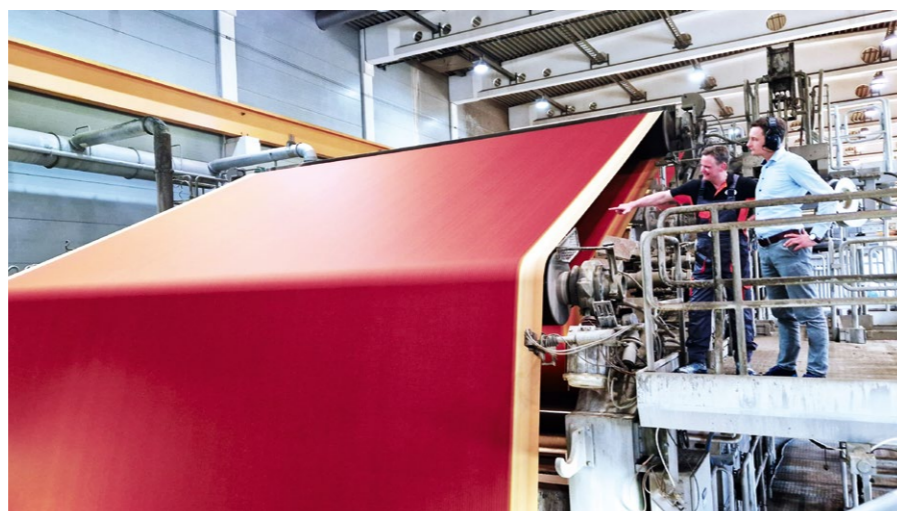
TASK section provided the decisive clue with the use of thermographic equipment, which enabled us to rectify the problem at the next shutdown. I would like to take this opportunity to thank them once again! Basically, all I can say is that things are running just as smoothly as we would want them to.

**And what are you looking for from Heimbach in the future?**

At this point, I should firstly state the obvious: The cooperation and quality of products should remain at the same high level where they currently are. There are other wishes in addition. From our point of view, it is very good that Heimbach manufactures to a large extent in Europe. This means we know that delivery times will be very short. Incidents or shortages can be responded to very quickly



Around 480,000 tons of corrugated base paper leave the Rudolstadt mill every year



Optimisations through on-site presence

without anybody having to take to the oceans. From my point of view, local production is also a commitment to Germany as a centre of competence. The products are supplied to a „neighbour“, and not to some customer thousands of kilometers away. Another wish concerns the sustainability of the products. Everybody has to deal with this and develop strategies for decarbonisation and conservation of resources. These considerations cannot end at the factory gate. As I see it, the partners of paper manufacturers must also become „greener“ so that we share a common future. It should, therefore, not just be desirable that the clothing industry also expands its efforts with regards to sustainable value chains, but indispensable.

**Speaking of sustainability: Your company is characterised by production that is particularly sustainable. Keyword Biogas: What can you tell us about it?**

We use Biogas from two sources. On one hand, we burn Biogas from the external wastewater treatment plant. Secondly, a significant amount of this very valuable energy source is also produced in our own process water treatment plant. The Biogas is used in two combined heat and power plants, but is also suitable for firing a gas boiler. The use of Biogas from anaerobic water treatment is an established practice across the industry. It is a matter of course for Jass, too, to make the most of this sustainable resource.

**What are the biggest challenges for your company in the future. Do you consider yourself well equipped to deal with them?**

Apart from the shortage of skilled workers, I see two huge issues at this time. On the one hand, it is difficult to foresee whether the demand for packaging papers will continue to follow the existing and planned capacities. Secondly, as a highly energy-intensive industry, we have to find ways to operate our production as CO2-free as is possible.



Site in Thüringen, East Germany

*„From my point of view, local production is also a commitment to Germany as a centre of competence. The products are supplied to a „neighbour“ and not to some customer thousands of kilometers away.“*

I believe that both issues have to be seen in a common context. The faster and better that we make „genuinely green“ papers here at Jass, the better we are positioned on the market with them. The challenge, though, is not to define a suitable strategy or set ambitious targets – we already have those.

Rather it is a case of finding suitable technical solutions and then establishing them in the process as quickly as possible.

**Dr Weiss, many thanks for the insights you provided at Jass and for your fascinating explanations.**

*„Basically, all I can say is that things are running just as smoothly as we would want them to.“*





## Dryer Section Audit Part 1

*Our sector is one of the most energy-intensive industries and is struggling hard in the face of spiralling costs. This, of course, is well known. It is equally well known that the dryer section is far and away the biggest energy guzzler on the paper machine. This makes it all the more worthwhile to take a closer look at this area. Here, too, there is enormous potential for savings to be made.*

*Unfortunately, our TASK team has no influence on gas prices, but it does have extensive knowhow and many years of practical experience working on paper machines across the world. We would like to share this with you and give our recommendations for an optimised dryer section. In the first part of this series of articles we will go into the different concepts and the influence that they have on the energy balance.*

First things first, though: When the paper web leaves the wet end section it has a dry content of maximum 60%. This value is subsequently increased by various further processes:

- **Convection and evaporation** (which is the oldest process), where the relatively low drying rate is strongly dependent on climate of the ambient air. Modern advancements on this are air hoods or flotation dryers.

- A major increase in the drying rate can be achieved by using **hot air during the impingement process**. This process is employed in conjunction with a Yankee cylinder in the manufacture of tissue papers.

- **Radiation drying** is mainly used after coating units and employs gas-heated elements to control the cross profile of the sheet.

- **Cylinder contact drying** has been optimised over a long period of time. Combined with an air system to remove the evaporated water mass, **this process is the most efficient in terms of energy and cost savings**. For this reason, we pay particular attention to this in our comments.

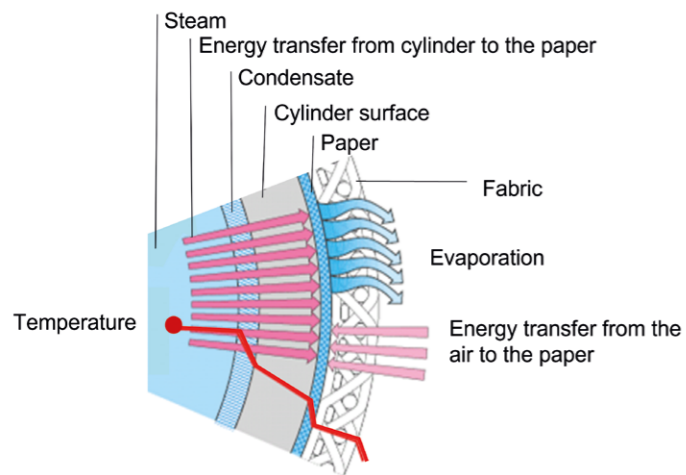


Fig. 1: Principle of heat transfer from steam to paper

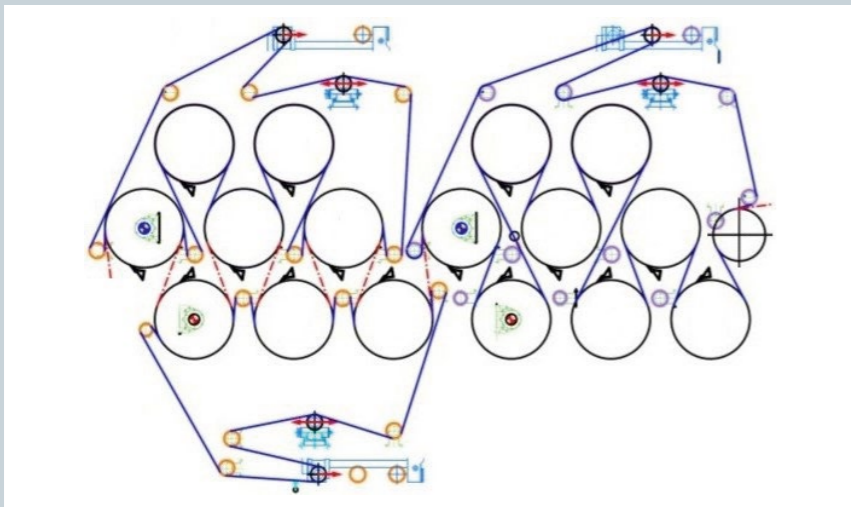


Fig.2: Three-row dryer group

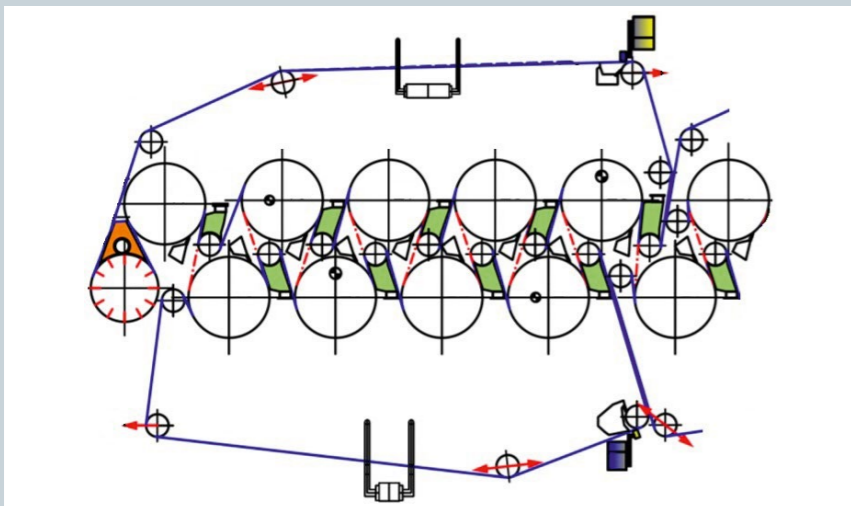


Fig. 3: Conventional dryer section with Cleaner

### Operating principles (Fig. 1)

1.) Transfer of heat to the paper web by means of steam condensation in the drying cylinders and evaporation of water from the sheet.

2.) Removal of the evaporated water by means of incoming air.

### Dryer section concepts and modernisations

The dryer section concept used in each individual case is dependent, among other things, on the paper grade to be produced.

For manufacture of board and cardboard, three-row dryer groups (Fig. 2) have been used for a long time. They have the advantage of a large contact area between cylinders and the paper web. This allows high web temperatures to be attained, which is much needed to remove remaining water from within a thick web.

### Two row design (Fig. 3)

Two super-imposed heated cylinder rows - covered by dryer fabrics at both bottom and top - was a standard for lighter basis weights for decades. Technical progress made it possible, in many cases, to make significant increases in the speed.

It is common today for many machines to run at twice their original design velocity. In certain cases this called for partial rebuilds or the re-dimensioning of guide rolls in order to ensure that a critical speed range was not reached.

### Single row or Slalom dryer groups (Fig. 4+5)

To avoid sheet breaks at an increased machine speed, the forward dryer sections were converted into slalom groups. With this method, the sheet is permanently stabilised by the dryer fabric. Web stabilisers are used in the slalom groups. These generate vacuum on the roll side of the dryer fabrics to compensate for adhesion and centrifugal forces. As speeds further increase the lower cylinders are replaced by VacRolls.

**If there are still drying cylinders in the lower row these need to be separated from the steam system, as contact with the dryer fabric means that heat is not transferred to the paper web.**

Inside the cylinders, the rotating siphons were replaced when speeds reached > 600m/min by stationary ones. The need for motive speed for the siphon was thus reduced to a minimum. When spoiler bars are introduced, efficiency of heat transfer can be increased.

In the case of new projects, cylinders are often made from steel instead of using cast iron. This, among other things, results in even better heat conduction from the heated steam to the paper web (approx 10% increase compared to cast iron cylinders).

With higher heat transfer to the paper web, the evaporation rate also increases. To ensure that the increased amount of resulting water can be removed, provision of supply and exhaust air must also be increased in the right place. So, for example, it serves little purpose to blow hot supply air into the fabric return runs via blow pipes in the upper part of the hood if this means that less fresh air is available in the evaporation zone below the cylinders.

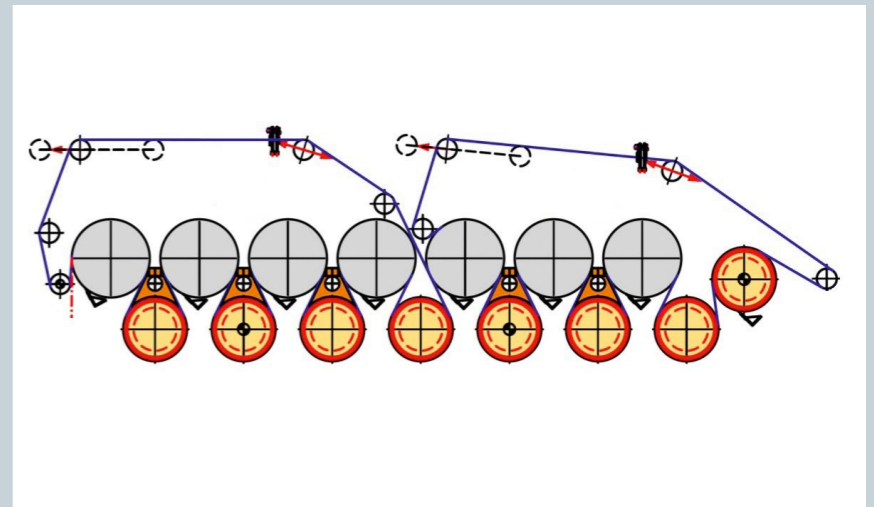


Fig. 4: Slalom group with pocket ventilation

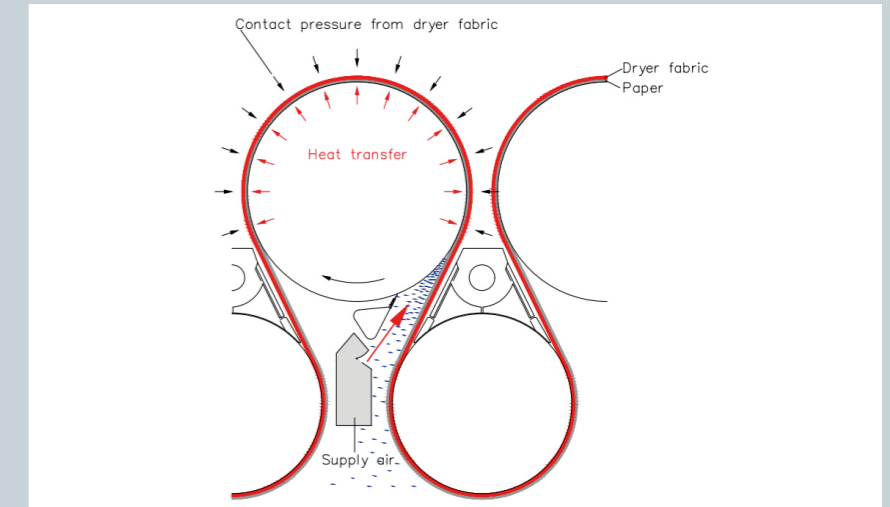


Fig. 5: Slalom group

*When spoiler bars are introduced, efficiency of heat transfer can be increased.*

*It is common today for many machines to run at twice their original design velocity.*

### Dryer fabrics through the ages

- In the past, needled dryer felts made from wool were used, which meant that a felt dryer was needed in each fabric run.

- Following the introduction of 100% synthetic fabrics, felt dryers became obsolete.

- Today, there are 2 dominant types of dryer fabrics: woven and spiral.

- Woven dryer fabrics are typically made from polyester, but can also be made from different materials, such as PPS (Polyphenylene Sulfide) to provide resistance to hydrolysis.

- Spiral fabrics are characterised by a high contact area – on both paper and roll sides. This gives a homogenous surface and increased resistance to abrasion.

- Modern dryer fabrics can, for example, significantly reduce the amount of contamination encountered.

- Today's dryer fabric designs tend to be much thinner than in earlier times. This in turn leads to lower speed differences, in slalom groups especially, and thus to a reduction in the stretch properties of the paper.

Modern, high-speed paper machines now require new concepts for fabric tensioning and guiding. In most cases, only internal guide rolls are employed. This means very high demands on the precision and consistency of the fabric length over its lifetime.

Optical sensors tend to be used rather than mechanical ones.

### Keeping the dryer section clean

With the increasing use of re-cycled papers, and the accumulation of contaminants (stickies) that this leads to, increased care and attention to cleaning becomes necessary. Although there are measures in place within the approach flow system to remove larger dirt particles, it is still possible for smaller „stickies“ to accumulate on dryer fabrics, rolls and cylinders. Such deposits can easily lead to breaks, reduced dryer section performance and poorer paper quality.

Stickies in the forward part of the dryer section can be responsible for defects in the CD moisture profile that are not possible to correct later in the process. For this reason, systems for keeping the dryers clean should be installed at the beginning of this section.

### In our experience, the following approach has proved to be successful in recent years:

- Equipping all cylinders with doctor systems for continuous operation.

- Installation of traversing high pressure cleaning systems, in particular in the front groups of the dryer section. Such systems have benefitted from steady improvement recently.

- Use of chemical passivation of the first cylinder in contact with the paper web in a dryer group. Ideally, the passivation is passed on to the following cylinders via the paper itself.

- Employ a heat strategy featuring shock drying for packaging papers (Fig. 6). Using the maximum steam pressure from cylinder 1 reduces the tendency towards fibre plucking and deposits of dirt particles.

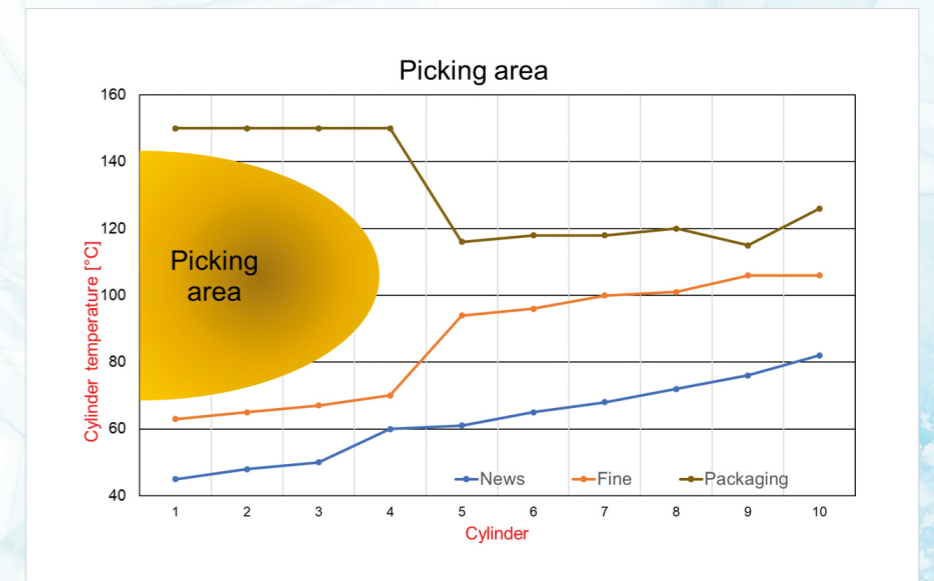


Fig. 6: Avoidance of fibre picking either by gentle heating of the paper web or by shock drying

So much for the first part of our „Dryer Section Audit“. In the next issue, you can find out which measurements and investigations we recommend to maintain high productivity in the dryer section.

Do you have questions regarding this article, or would you like information regarding our services?

Lukas Wiczorek  
will gladly answer your questions  
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*Modern, high-speed paper machines now require new concepts for fabric tensioning and guiding. In most cases, only internal guide rolls are employed.*

# Insider tips for students

*Paper technology is a high-tech course with focus on sustainability and different perspectives. This quickly becomes evident when listening to Professor Emanuele Martorana. Since last year he has been teaching chemical process engineering for paper and biofibres at the Munich University of Applied Sciences – an engineering course comprising seven semesters, with an integrated practical semester. Among other topics, his students look at innovative technologies, energy efficiency and the future of the paper industry. In spite of this, many young people know very little about studying paper technology. Heimbach, a major cooperation partner for various high schools and papermaking institutions over many years, met up with the professor for an interview.*

**You come originally from north Rhine-Westphalia and now live in Munich, Germany's third largest city with one of the biggest universities in the country. What is it in particular that you like about this metropolis on the Isar river?**

Since I began my paper technology studies in Munich some twenty years ago, I am of course very familiar with the city. Everything is great here, except for the high cost of renting. I particularly like the abundance of recreational activities, along with the proximity to the mountains and southern Europe.

**You succeeded Professor Stefan Kleeman in March 2022. Who are the people that make up the core team of the Paper and Biofibre Process Engineering course?**

As well as myself, we have Prof Helga Zollner-Croll and Prof Jürgen Belle who complete the paper technology team. Prof Zollner-Croll is Vice Dean of the 05 Faculty and teaches Biogenic fibres. This doesn't only cover classic pulp production, but also alternative fibres such as those from annual plants and their use in innovative fibre products. Other areas of focus are

tissue papers and everything to do with the environment and sustainability. Prof Belle teaches everything to do with the process technology of paper and board production. I tend to focus more on the chemical side of things, such as biopolymer chemistry, paper chemistry and surface finishing.

**The access rights to studies have become more diverse over time. Could you give us an overview of what is possible today for interested parties, or companies?**

**The keywords here would be dual studies: The training as a paper technologist can be integrated, is that so?**

That is correct. Both the access authorisations and the types of degrees have become far more diverse. Where access authorisations are concerned, you no longer necessarily need a high school diploma or a specialised baccalaureate these days. A masters qualification or even vocational training as a paper technologist can also be sufficient to allow admission to our programme. There is, however, a prerequisite for three years of prior work experience in these cases. In addition to the classic Bachelors and Masters degrees we also have an option to study with us on a „dual“ basis. In this case, „dual“ would mean significantly more practical experience. This could be integrated vocational training (compound study) or additional practical activities during the semester breaks (study with in-depth practise).

**More open access would most likely bring together students with diverse backgrounds and professional experience. This would probably have a positive effect on education and also enrich lectures.**

**Are you already seeing a trend in prospective students and enrolments?**

Yes, we can see this for sure. We have a good mix of students both with and without practical experience and with a range of different school degrees. We have noticed, in recent times, that it is also common for students without high school diplomas to start with us, those with master craftsman training or even vocational training with practical experience, for example. In the latter case, however, it is necessary to sit a university entrance exam with us.

**Munich University of Applied Sciences is very active on various social media**

**channels. Is it necessary for the road to the paper industry to become digital in order to attract the next generation?**

Since we are such a small and familiar facility we do actually reach most of the next generation via word of mouth. This is especially the case with people who already know that they want to study paper engineering. The social media channels, such as Instagram, are predominantly there to reach young people who have not yet come into contact with the subject of paper at all. Other measures aimed at younger people, such as visits in school classrooms, open days, trade show appearances, or even excursions are also organised on a regular basis.

*„In addition to the classic Bachelors and Masters degrees we also have an option to study with us on a „dual“ basis. In this case, „dual“ would mean significantly more practical experience.“*



**HM** Hochschule München University of Applied Sciences

*Prof. Emanuele Martorana (middle of picture) on a site visit with students to Heinzel, Laakirchen*



**You spent almost five years in China before accepting this latest appointment at Munich University. What can you tell us about the country and its people? What experiences, both professional and private, did you have?**

I made many friends in China, both expats and among the local Chinese community. I found learning a new language to be very enriching and enjoyed immersion in a different culture. In addition to this, I was able to travel, making many trips to neighbouring countries, such as Japan, Laos and even North Korea.

On the professional side, many things were very different between Germany and China, which was an extreme challenge in the beginning. The approach there is much more pragmatic with many things, such as customer visits or interviews for the local

television station, being very spontaneous (with just a few hours notice). I particularly appreciated the fact that ideas are implemented much more rapidly in China than over here. On the other hand, the approach applies much less planning, which can also have disadvantages. I therefore tried my best to combine the best of both countries.

**Sustainability is a keyword for our time. Are your courses that deal with alternative raw material use in high demand, for example?**

*„Very few people know that it is possible to study paper technology, and they also do not know about the many opportunities that there are in our field.“*

Topics such as sustainability, recycling, circular economy, biofibres or even energy efficiency have been firmly embedded in our curriculum for a considerable time. Unfortunately, young people do not automatically associate this with the terms „paper“ or „packaging“. This was one of the reasons why we recently made the decision to rename our study programme „Sustainable Materials and Product Design“, with the field of study being „Biofibres and Paper“. By doing so, we hope to attract more prospective students to the paper industry. This applies in particular to those who do not yet have any connection to paper.

**The paper industry has been in a state of upheaval since well before the energy crisis. Where is the teaching at Munich University of Applied Sciences linked to research into climate-neutral paper production?**

Prof Belle is very active in this field, and has recently been endowed with a research professorship with the Bavarian High-Tech Agenda. He will be working intensively on these topics with us in the future. He has already initiated cooperation with the model paper mill in Düren.

**If you were a student again today and you were able to choose a subject area for your thesis, what would it be?**

Most likely in the area of sustainable packaging solutions. The topic of barriers for packaging that is both bio-degradable and made from renewable raw materials is currently a very exciting field of research. If this packaging is then made recyclable, you have got it made!

**What do you believe is lacking in terms of attracting young people to the paper industry?**

In my opinion, it is as simple as a lack of awareness. Very few people know that it is possible to study paper technology, and they also do not know about the many opportunities that there are in our field. We need, as an industry, to be much more present overall and show this to the younger generation. It must also be said that the paper industry tends to be very conservative in comparison to other business segments. There is certainly some room for improvement here.

**Once they have graduated, students have all doors open to them. That is more the case now than ever. When choosing a future employer, what criteria do you think are important to young people today? What makes a company attractive to Generation Z?**

In addition to salary and the actual position, it is very clear nowadays that Generation Z is increasingly attaching importance to other factors. These include, for instance, flexible working hours, home office, part time working or additional benefits. At the same time, „soft“ factors such as corporate culture, motivation and future colleagues also appear to be playing a more important role.

**Heimbach gives regular support to technical colleges and universities in the form of on-site lectures or visits to our premises accompanied by workshops. How do you think we could further intensify this cooperation, or what would you like to see from the industry?**

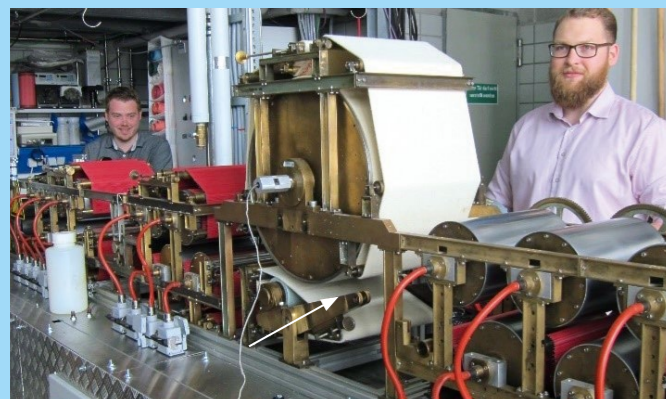
There is no doubt that lectures and excursions are great ways to promote exchange between students and the industry. We would like to see more support, in particular in the area of marketing and advertising for young talent. We will only manage to



Recruiting young talent at a training fair



Combining theory with practise



Practical work on the pilot machine



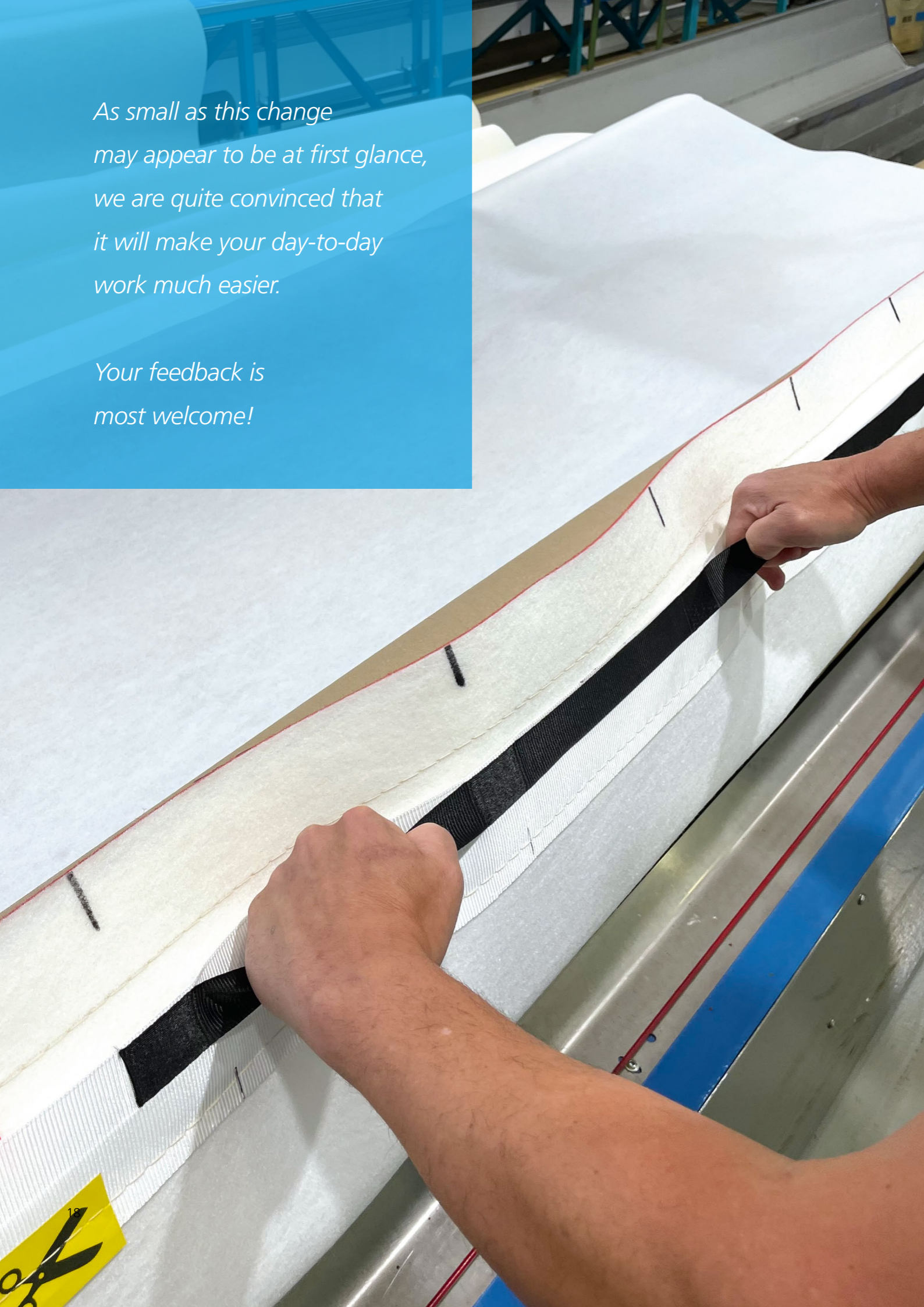
Pilot paper machine at Munich University



Laboratory sheet formation in the papermaking pilot plant

As small as this change may appear to be at first glance, we are quite convinced that it will make your day-to-day work much easier.

Your feedback is most welcome!



## Small change, big effect

*Installation of seam felts is significantly more reliable and faster than with conventional endless felts. As our aim is to ensure that everyone involved in the process can work as efficiently and in as much comfort as possible, Heimbach is continually reviewing and developing its drawing in and seam closing aids. The latest result of this is a new braking aid for seamed felts.*

**As the name implies, this prevents the end of the felt from suddenly coming loose at the winding core and falling down.**

This is always a possibility, especially in top felt positions. Up till now, users have been familiar with the continuously sewn-on aisle tape with the yellow retaining loops. It is easy to remove from the machine after feeding (Fig 1). Apart from the pure deceleration function this variant offered no added value to the user. We have now modified this as part of our programme to improve and simplify. The belt with the retaining loops is no longer on the roll side, having been moved to the paper side (Fig 2).

### **Greater comfort and time saved**

What are the benefits for you? The loops are now accessible during the entire seaming process. They can now be put to further use in order to optimally align the felt ends prior to closing the zipper (Fig. 3, left). While previously it was necessary to work from the roll side, or to pack the seam ends, the felt can now be moved into position from the paper side using both hands. In addition to the greater convenience that this brings to the process, it also saves a lot of time.

### **... and a small contribution to the environment**

Nature also stands to gain from this innovation. The new design saves superfluous material. When extras, such as handles, were required the handle tape was previously sewn on twice – both roll and paper side. Our modification manages this in a more ecological and economical way, in line with our commitment to sustainable actions. Braking aids and other accessories will now for the most part be fitted on the paper side only.



Fig. 1: Before



Fig. 2: After



## Specialists you can rely on

*impressive* in conversation with Heimbach customer service personnel

*We are often talking about products, technologies, successes. That is both important and the right thing to do. But we must not forget the people behind them. Today we are taking the opportunity to introduce you to three more of our colleagues. Each one is a seasoned expert within the paper industry. They have all been members of the Heimbach team for many years and are highly experienced in their field. So they can not only offer solution-oriented theoretical advice, but also lend a hand in practise.*

### Uwe Hentschel

*Applications Specialist – Belting (Shoe press and Transfer belts)*



*„I love working on machines and with people – people from whom I can always learn something. At the same time, I am very happy when our customers are able to benefit from my knowledge.“*

#### **What is your professional background?**

I completed my training as a paper technician in 1981 and worked for many years in a fine paper mill.

#### **How long have you been with Heimbach?**

It all started in October 2006 when I joined the TASK Department. I switched to the Application Department in 2010 and took over responsibility for providing Belt services.

#### **What do you like most about your job?**

The job is varied and extremely challenging. I love working on machines and with people – people from whom I can always learn something. At the same time, I am very happy when our customers are able to benefit from my knowledge.

#### **What was the decisive factor in your decision to enter the paper industry?**

It actually feels like I have always been in the business. My fascination with the paper industry began at a very early age. After many years of working on the paper machine, I was finally tempted by the idea of a change in perspective. When Heimbach were searching for reinforcements at the same time, I jumped at the opportunity to support the servicing of paper machine clothing.

#### **What would you have done if you had not joined the paper industry?**

My father comes from a woodworking background and I had plenty of exposure to this in my early years. As I am not completely without talent with my hands, I would most likely have become a carpenter.

#### **Is there something that makes you particularly proud? Or an experience that remains imprinted on your memory?**

One thing in which I take great pride is the development of our Webmover line. In terms of service life and performance a great deal has happened over the last years. Originally, a multi-axial transfer belt was out of the question.

#### **When you look back 20 years: How has the paper industry changed? And how does that then impact your work?**

As is the case with many other industries, the paper sector has certainly become more modern, but also more complex. Demands on processes, products and services are in a state of constant change.

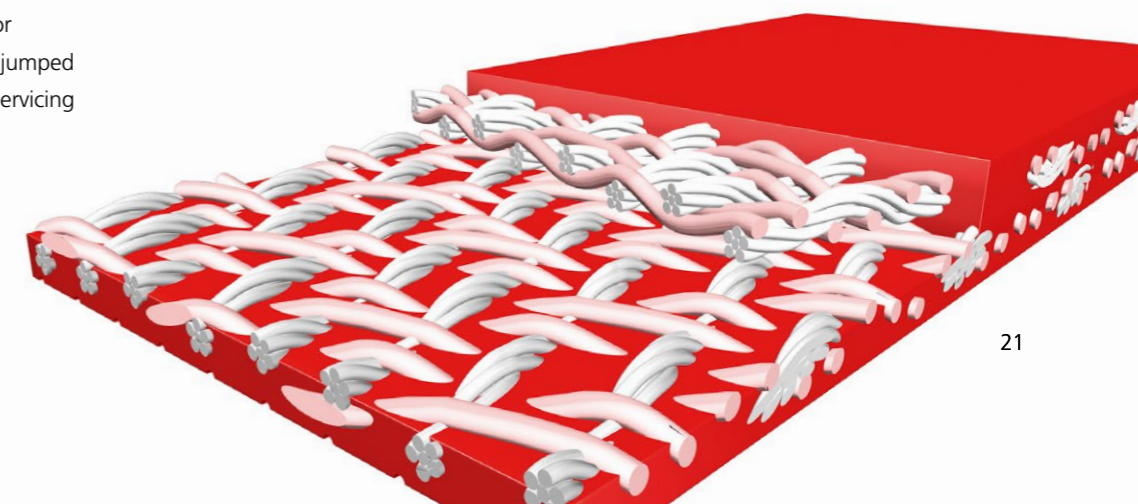
It is only by means of perfectly coordinated interaction that maximum productivity can be achieved. This, of course, is where we try to make our contribution in the form of troubleshooting.

#### **You are first and foremost „Fire fighters“. Have there been situations where a solution seemed impossible at first glance?**

Fortunately, I can say that I have not experienced this to date over my long years at Heimbach. We are a well-coordinated and experienced team. We get to grips with very tricky cases collectively.

#### **How do you unwind after a hard days work?**

Although gardening can be occasionally exhausting, it does help me relax and find peace.





**Klaus Nußbaum (Dipl.-Ing.)**

*Service technician with focus on forming fabrics*

*„Dealing with people, the great variety of machines and different technologies present me with new and different challenges on a daily basis.“*

**How long have you been with Heimbach?**

Since October 2018.

**What training or studies do you have on your cv?**

On graduation from high school, I took an apprenticeship as a papermaker. Following this, I went on to study process engineering at the University of Applied Sciences in Munich, specialising of course in paper production.

**What do you always enjoy about your job?**

No two days are the same. Dealing with people, the great variety of machines and different technologies present me with new and different challenges on a daily basis.

**Of all places, how did you end up in the paper industry?**

I always wanted to study something different, something untypical. I only became familiar with the profession of papermaker, as it was known back then, shortly before I started my apprenticeship.

**Which alternative industry, or profession, could it have been for you?**

Having always been a technology enthusiast, I did toy with the idea of becoming a civil engineer.

**Is there anything that still surprises you or blows you away, even after all these years in the business?**

It may not be astonishing, but I am still surprised every now and then. We sometimes encounter problems on the machine that appear suddenly and without any initial explanation for the cause. Even after many years of professional experience and comprehensive theoretical training you are still constantly learning new things. Of course, this does also make it exciting.

**You have been in the business a long time now. What is fundamentally different today compared to 20 years ago?**

**What does that mean to you?**  
Without doubt the development of paper machines. Speed, size, quality, efficiency – we are in a world of completely different dimensions today. It's a lot of fun to be involved and to have the opportunity to help shape the changes.

**When you and your colleagues are called upon, the pressure from the customer side can sometimes be enormous. Have you ever thought: I can't do this any more?**

It can sometimes be that problems occur on the machine for which there is no plausible explanation. At times like this, you shut down the machine, carry out cleaning work and possibly also change some clothing. If, after this, everything runs smoothly this is very good – on the one hand. Ideally, however, we also need to be able to find the reason for the poor performance of the machine and clearly identify the problem. After all, we want to draw conclusions from the cause of the fault and ideally use this knowledge to prevent such failures from occurring at an earlier stage. It is easy to despair over this, but I never do. That is how we always reach our goal, in the end.

**Working in service within the paper industry is often pure stress.**

**What do you do in your free time to balance things out?**  
I can think of several things: a good dinner with my family, time with my children and grandchildren. I also play music and lead a bereavement group for parents of stillbirths.



**Pietro Filitto**

*Technical Service/Support for:*

- Seam and fabric control in the dryer section
- Installation and support for fitting and seaming of dryer fabrics
- Repairs of forming/dryer fabrics and press felts (narrowing, sewing, Connect)

*„After many years in a range of different production areas, I know our products like the back of my hand.“*

**Tell us, what have you learnt?**

After finishing school, I did my apprenticeship as a textile machine operator in the weaving mill at Heimbach.

**Heimbach and you, that is really a long story. When did it begin?**

I am in my 38th year at Heimbach, and since 1985 I have been involved in various departments, including weaving and seaming. From 2001, I have been increasingly involved in service support and assisting our customers on site.

**What continues to motivate you after spending so many years in the job?**

Putting theory into practice. After many years in a range of different production areas, I know our products like the back of my hand and have become increasingly involved in development, especially when it come to closing aids, or accessories for example. This has given me the opportunity to actually see, on site, whether - and how - things work in practice. Also, if there is room for improvement, I have a direct line to my colleagues who can influence this.

**You could clearly have been many things. What was the reason for your career choice?**

In the 80's, there was more money to be made in industry than in the trades. Having been born in Düren/Mariaweiler, Heimbach was naturally a very familiar name to me. Even back in those days the company was renowned for the quality of its training, so Heimbach was always my first choice.

**Was there an alternative career that you had an eye on?**

Professional soldier or electrician, I am comfortable with tension and flashpoints.

**Is there anything that can knock out an old hand like yourself?**

Nothing can scare me that easily. The paper industry is full of surprises and I love taking on new challenges. When I repair a dryer fabric for example, and in doing so prevent its premature removal, that brings me satisfaction.

**You had already been with Heimbach a long time at the turn of the millenium. How has the paper industry changed since then?**

**How has your job changed too?**  
Spontaneously, the topic of occupational safety comes to mind. 20 years ago, when I had my first assignments at the customer, things were handled very differently. Today, we work to extremely high safety standards, which is not always easy on modern paper machines. In general, and partly as a result of this, the preparation and follow-up of service calls has become much more time-consuming.

**You must have many memories of your time so far at Heimbach. There were probably quite a few highlights?**

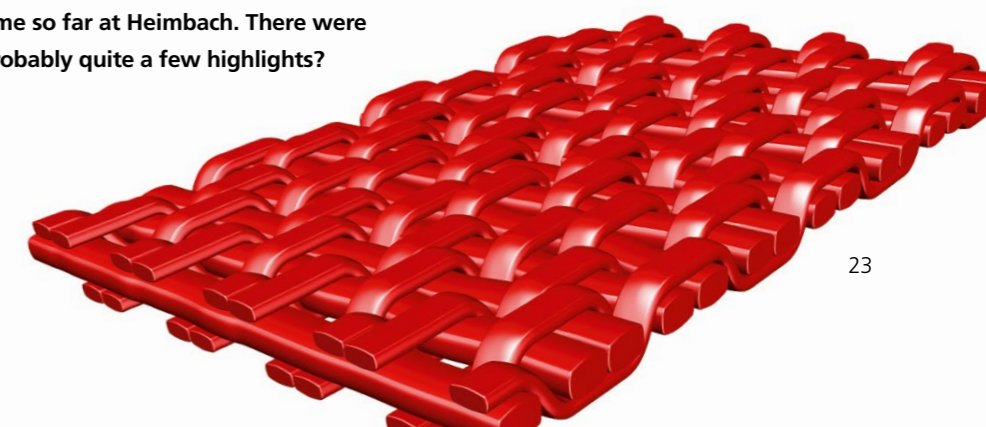
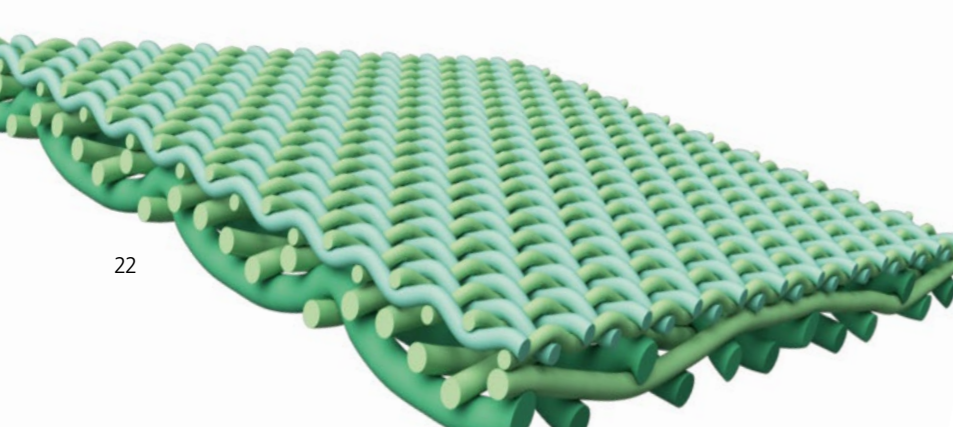
For sure, yes. I was involved in a number of trend-setting developments, for example the non-wovens line and Atrocross calander in Düren. I also have very fond memories of the numerous first clothing installations on brand new paper machines that I have attended. Another highlight was the introduction of user training for threading and closing aids at our Swiss site in Olten, and the subsequent establishment of a similar department in Düren.

**There must be exceptional situations in the job that you do. Have you ever really broken into a cold sweat?**

I remember taking out dryer fabrics for installation during an initial clothing run. The fabrics were lying in position and it was noticeable that the winding rod and motor for retraction were missing. Both were initially present but could not be found anywhere, even after an intensive search. There was no time to wait for spare parts, so we had to pull in the dryer fabrics using only concentrated manpower – ie; by hand! The dryer fabric was approximately 70m long and 9m wide.

**How do you relax after a day like that?**

Fortunately I am able to relax during lengthy car journeys on the motorway. In my free time I practise WingTsun or go out on my motorbike.





## When it comes to performance



Your paper machine certainly has a lot of potential, it's a question of getting it out: Start up faster, dewater more and run your clothing for longer - with our New-Tech fabrics you can increase performance and cost efficiency. Are you looking for process optimisation? Our experts can support you in reaching your goals with a combination of high-tech equipment and know-how. Learn more at:

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

