

impressive

ISSUE 3/2020

On the trail of moisture

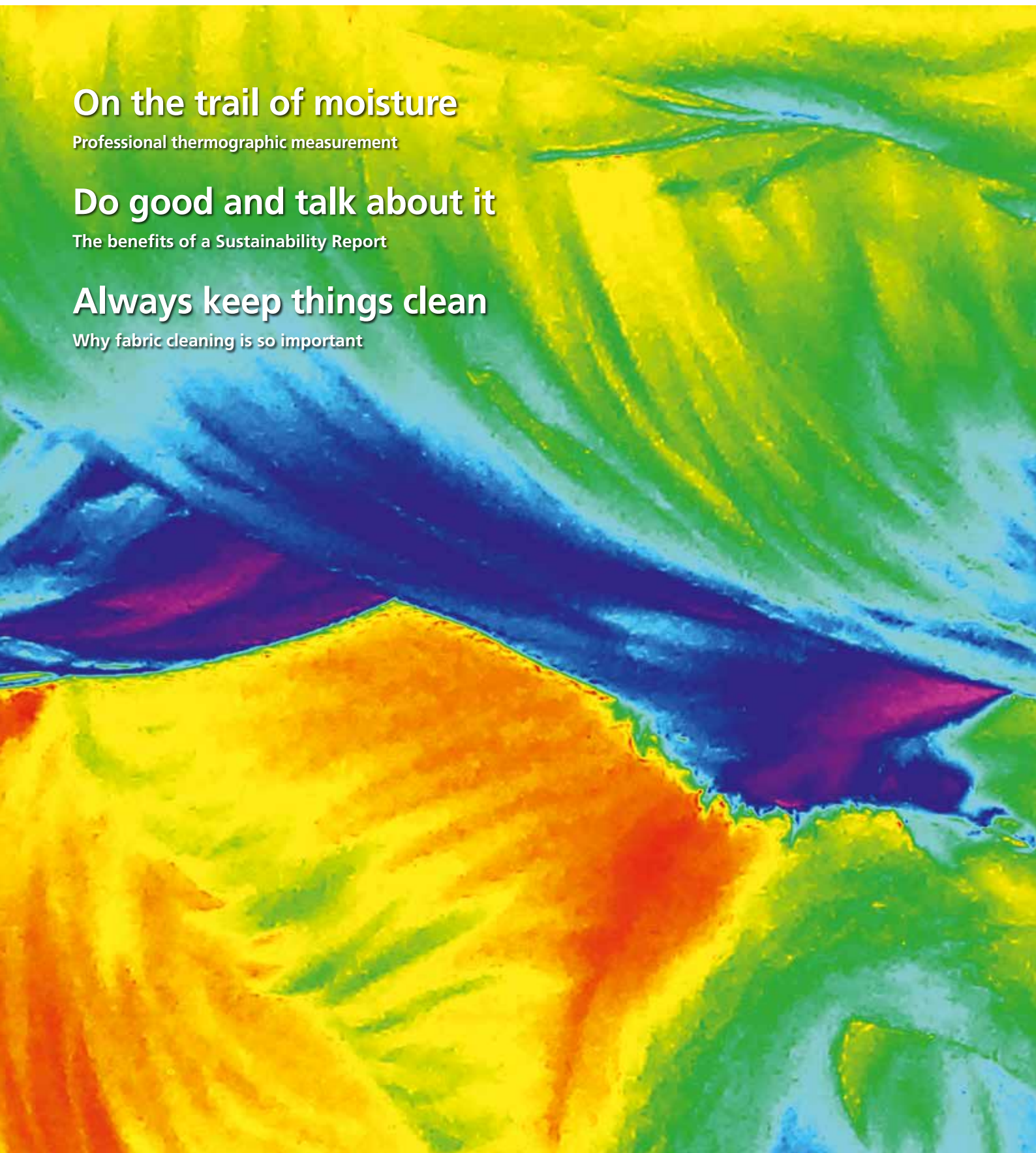
Professional thermographic measurement

Do good and talk about it

The benefits of a Sustainability Report

Always keep things clean

Why fabric cleaning is so important



03
**„We don't want to take
any risks and yet still achieve
maximum performance.“**

Interview with Johannes Künne

06
On the trail of moisture

Professional thermographic measurement

10
Do good and talk about it

The benefits of a Sustainability Report

12
Always keep things clean

Why fabric cleaning is so important

16
Safely the highest performance

Modern seam felt technology

20
In profile

Four „Heimbachers“ introduce themselves

22
Thanks for the vote of confidence

Impressive references

23
An industry reinvents itself

The model paper mill comes to Düren

Imprint

Publisher

Heimbach GmbH

52348 Düren

Germany

Phone.: +49 (0) 2421 / 802 0

email: info@heimbach.com

www.heimbach.com



Dear readers,

Do you find that at the moment the term 'sustainability' crops up at every turn? And this is despite the fact that the subject itself could hardly be any older. As early as 1713 the forester Hans Carl von Carlowitz recognised the interaction between environmental balance, economic security and social justice, in the face of ever more scarce wood resources. And even though our world is becoming increasingly complex, the concept remains the same and as relevant today as it was then: Consume only as much as allows future generations to live a happy and dignified life.

For papermakers and for us as partners, the terms sustainability and innovation are inseparable. True to the saying "Do good and talk about it" our actions are characterised by transparency and commitment. The first Heimbach Sustainability Report has been available on our website for a few weeks now. For us it is both an incentive and a commitment to continue on the path taken and to consistently improve our actions.

We want to look forward and to leave the next generation a good foundation upon which to build further success. This was always important to me over the last 25 years at Heimbach. I am using the past tense here because I will be retiring at the end of this year and will hand over the management to Marco Esper. With his professional skills and his extensive experience in the industry he will keep Heimbach on course for further growth.

As I take my leave, I would like to express my thanks to all customers and employees for your trust. For this is what has always been at the heart of Heimbach: partnership and cooperation.

With best wishes,

Yours, Peter Michels

Management spokesman

„We don't want to take any risks and yet still achieve maximum performance.“

*impressive in conversation with Johannes Künne –
Production Manager HANS KOLB Paper Manufacturers, Kaufbeuren*



Didier Reip, Heimbach (left), and Johannes Künne (right) have found the right concept

Mr Künne, would you be so kind as to introduce your company briefly to our readers.

With pleasure. HANS KOLB Paper Mill develops and produces innovative secondary fibre papers. They are the base materials for a variety of corrugated board packaging solutions from the KOLB group of companies. This comprises six sites altogether where we fulfil up to 600 individual orders daily. Incidentally, 70 percent of the waste paper required for our base paper comes from our own factory.

What distinguishes KOLB from its competitors?

There is quite a lot that we're proud of. First there would probably be our material expertise in the production of recycled base papers right up to innovative corrugated paper profiles, resulting in tailored

packaging solutions for nearly all sectors. In addition, we are not just a system provider on paper. No matter what requirements and wishes our customers

may have, we understand, fulfil and deliver consistently. In terms of technology we are at the forefront. We work with different printing processes and highly technical solutions – such as electrostatic protection for the electronics industry.



Corrugated paper rather than plastic. A large number of your customers attach increasing importance to „sustainable“ packaging solutions, among them well-known brands. How do you see the future market development?

Rising climate awareness, particularly among young people, will certainly continue to drive green packaging forward. Our eco-friendly corrugated paper means we have always been well prepared for this development. Thanks to our own added value in the production of secondary fibre paper and the regional raw materials cycle we are able to react quickly to the requirements of the market. By the way, all our corrugated base papers have been awarded the Blue Angel certification.

In our exchanges with paper manufacturers worldwide we frequently come across exciting products.

What's new in KOLB's portfolio at the moment?

This makes me think of CORCOOL immediately, a clever packaging solution particularly for the mail order of climate sensitive products. The construction, which comprises separate cooling chambers, prevents direct contact of the cooling pack with the packaged goods. The whole box is also made from sandwiched corrugated paper, which prevents condensation in the chilled interior. A real step forward for e-commerce.

Last summer you invested heavily once again. Six million Euros in the modernisation of the press section in Kaufbeuren alone. What were your motives for doing this?

Securing competitiveness is a continuous challenge for KOLB as much as for others. We have made sure that the company is future proof by thoroughly modernising the press section and other components. This is in line with the consistent implementation of our sustainability strategy.

What was the greatest challenge in this project?

Like so many in our industry, we are constantly under pressure regarding production and deadlines. We, too, cannot afford unscheduled downtimes. Hence the time frame was tight. Seamless cooperation of all project and process partners was called for.

You put your trust in Heimbach in all three sections. In the press section this extended to 100% supply. Can you tell us why?

In Heimbach we have an absolute machine clothing specialist at our side. It was clear to us from the start that we did not want to take any risks and yet still achieve maximum performance. From the beginning of the project phase we were in close contact with the experts from Düren. This meant that we were able to draw on their huge experience with similar press concepts. After all, we did not need an individual solution but a coherent overall concept. In addition to product consultation we were also very impressed with the technical assistance provided by TASK. Collaborating with Heimbach was the logical outcome.

How do you rate the start-up assistance provided by Heimbach through their HOME and TASK service?

Very good. The entire conversion could not have gone any better. All concerned worked hand in hand from the start, as I said: perfect team work. Here too the cooperative thinking at Heimbach came to the fore. Thanks to the intensive support from their customer service – first and foremost through Didier Reip – we felt in safe hands in case any issues should arise. Happily though, there were no major problems.



CORCOOL: Outer packaging for foods requiring refrigeration made from sandwiched corrugated paper



What is the most important factor for you when choosing machine clothing?

We sell high-value packaging solutions. This means that, in addition to the appropriate stability values, good surface characteristics and printability are our main focus. And of course we place great value on easy and safe handling when installing the clothing. In short: We rely on seam felts which do not mark and which have good seamability.

54% dry content after the shoe press was your declared aim. And you really did achieve it. How exactly?

Yes, I was surprised myself. But for the first time we are finally able to go to the limit with nip dewatering.

With Atromaxx-Connect we have sufficient volume to deal with large amounts of water consistently. This in turn has a positive influence on production speed. In addition the multi-axial felts remain open for a long time and react well to felt washing, if this is necessary at all.

**Finally:
What do your long-term business aims look like?**

Never before has the market for paper and cartonboard been as dynamic as it is now, and in future intelligent packaging concepts will have an even greater part to play. For us this means planning the solution for tomorrow's requirements today.

HANS KOLB 
PAPIER

Founded: 1933

Approximately 1.100 employees

Paper grades: Testliner, Kraftliner, High Performance Fluting, KOLB Highliner

Annual production: ca. 80.000 t



On the trail of moisture

Professional thermographic measurement

The Pandemic has certainly taught us a lot of things, but has also allowed us to re-discover the tried and tested. Just think for a moment about travel and the scenes in airports and at train stations on the news.

One detail is shown again and again: the thermal imaging camera. This tool has been around for many years, but in the current situation is of particular importance. This is mainly due to the fact that a thermographic camera provides reliable measurements without contact.

Our TASK team is not fighting a pandemic, of course, but uses thermography to investigate moisture problems in the paper web.

Fault analysis during operation

If the edge area of the sheet is suddenly too wet, those responsible quickly start to sweat. This is because the origins are usually difficult to identify. So how can you locate and eliminate the cause without incurring major production losses?

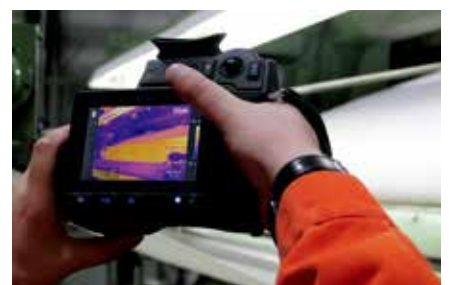
To overcome this difficult challenge we use thermographic measurements, which enable us to record temperatures without contact



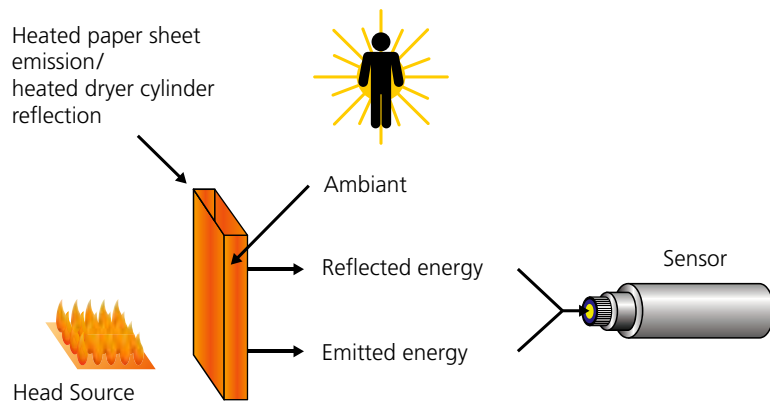
and display the results visually. The heat differences that can be determined provide reliable information concerning the point at which moisture content deviates from target. For this, of course, we require the right equipment, which consists of an infrared camera and special software. This alone does not suffice, however, as we also require qualified personnel to analyse and interpret the recorded data using extensive application experience and technical know-how.

How exactly does thermography work?

Thermography is a non-contact measurement procedure. With this method, the camera measures the infrared radiation emitted by an object, in our case for example the paper web or the dryer fabric. These recordings reflect the temperatures that are transferred from the drying cylinder to the paper web.



Recording with the thermal camera



Reflection and emission influence the sensor

The temperature differences must be taken from either the sheet or the dryer fabric, as dryer cylinders are smooth and therefore too reflective.

Thermographic measurement is unable to provide meaningful results when applied to surfaces that reflect more strongly than they emit. In the case of dryer cylinders then, surface temperature would have to be determined by contact thermometers.

It is also difficult for thermal imaging cameras to measure in the forming and press sections, due to difficulties in detecting high and low temperatures prior to the first dryer cylinder as fibres and water still have the same temperatures at this point. You could say then,

that the Thermographic camera only becomes really „hot“ in the dryer section. In turn, the software makes it possible to display thermal deviations clearly and in colour.

A practical example

We measure temperature differences across the paper web on site and thus detect moisture differences in the width of the sheet.

We can say, in principle, that the higher the temperature difference, the greater the moisture difference at the measured point. Up to now, it all seems rather theoretical. Let's go into more practical detail using a concrete example.

A customer complained of wet edges on the drive side of his paper machine. You can imagine the problems that this could cause: more frequent sheet breaks and potential production losses. Internally the problem was suspected to lie in the dryer section. The TASK team was commissioned to examine this area in order to determine the exact cause.

We had asked in advance that the steam box be turned off 24 hours before our measurements. Otherwise, the paper sheet would be too hot to allow differentiated measurement and temperature differences could therefore no longer be localised. We were able to start right away on site – only the moisture bar had to be switched off.

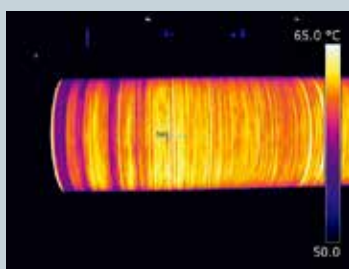
We took the first pictures at the reel. It is here that experience tells us uneven moisture is of the greatest interest to our customers as it actually goes on sale or is further processed. We then worked our way towards the press section, frame by frame.

Finding a solution through a process of elimination

During our evaluation, we found that the wet edge was clearly visible on recordings



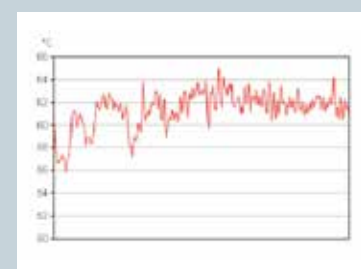
Moisture profile before the reel / higher moisture on the drive side



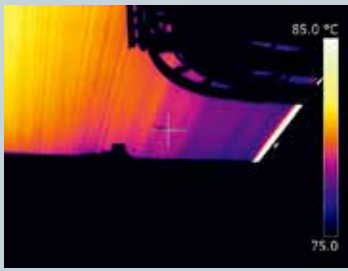
IR recording, drive side of the reel



Digital recording drive side of the reel



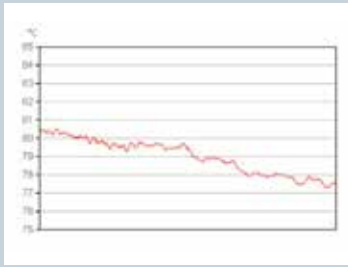
IR profile measurement drive side of the reel



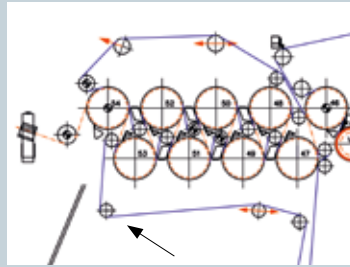
IR recording, 8. Dryer Group DS



Digital recording, 8. Dryer Group DS



IR Profile measurement, 8. Dryer Group DS



Measuring position, 8. Dryer Group DS

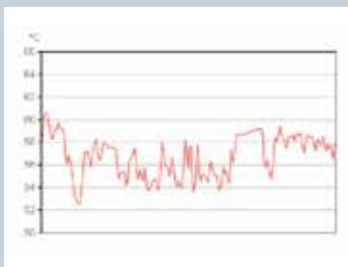
8. Dryer Group DS



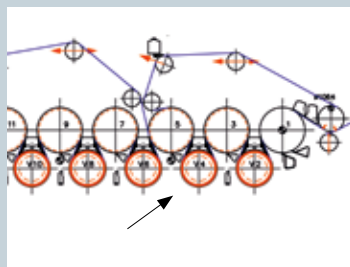
IR recording, 1. Dryer Group DS



Digital recording, 1. Dryer Group DS



IR Profile measurement, 1. Dryer Group DS



Measuring position, 8. Dryer Group DS

1. Dryer Group DS

made at the reel. This then led like a red thread through to the first drying group. It was therefore clear to us that we should switch our focus onto the press section, rather than in the dryers. The production manager had only just read our new TASK catalogue a few weeks beforehand,

so lost no time in ordering a nip profile measurement immediately after our thermographic work.

No sooner said than done. We were back at the next stop. We found that some pressure pistons in the drive side edge area of the

shoe were not working as required. The pressure required for effective dewatering was insufficient here.

Conclusion:

Thanks to the thermographic measurement, the dryer section could be excluded as a possible cause of the problem, and a further measurement from TASK quickly and successfully localised the problem. Production is once more running optimally and we had been able to localise the problem through a combination of precise measurements, targeted analyses and our infamous process of elimination.

Reach your goal quickly and effectively with thermography

Thermal measurements normally take up to two hours. We need a further four to five hours for the precise data analysis.

To get started, all we need is a stable run. We normally find optimal conditions after a planned shutdown, and if there is a steam box this should be switched off 24 hours beforehand. That's all there is to it, so that your machine can produce paper with even CD moisture profiles again in the shortest time possible.

You can find detailed information about measurements and interesting Case Studies in our TASK Service Catalogue – also online at www.heimbach.com

Do good and talk about it

Googling “sustainability report” produces a large number of hits. However, the examples given almost always involve major international companies. Does this mean that such publications are merely expensive image campaigns on the part of high revenue large corporations? Or could it be that paper manufacturers also benefit from these so-called CSR reports? In June of this year Heimbach presented its report for the last years. In it we give all interested parties a detailed insight into our activities and goals for the benefit of nature, our employees and society. And maybe even inspiration of one kind or another.



Stefan Körfer looks forward optimistically to the next EcoVadis audit

A brief explanation of terms

The demand for more sustainability is omnipresent. Striking pupils and the dawning realisation that our planet's resources are finite have intensified the change in societal thinking. Also and particularly in the paper industry we come across this commitment on a daily basis. But what does it mean exactly? As is so often the case we frequently say the same thing but mean something quite different.

Sustainability in its original sense means using the planet's resources in a way that maintains their availability at all times and in the long term. The central argument in this is inter-generational justice. For the paper industry

this means planning and managing the large demand on wood, energy and water in a way that is as environmentally sustainable as possible. After all, we do tend to scrutinise the production of paper more than that of other consumer goods.

Incidentally, the term goes back much further than we often think. The forester Hans Carl von Carlowitz coined the term and in 1713 defined the triangle of environmental balance, economic security, and social justice.

Of course the modern designation has a considerably wider scope. In addition to

environmental factors such as the reduction of CO₂ emissions, energy saving and conservation of natural resources, societal aspects such as social standards in production and fair trade are also important. In addition, there are economic factors to be considered. These include efficiency, practicality, life cycle and regional origin of a product.

Credibility and transparency pay off

Let's get back to the sustainability report, often also called CSR Report (Corporate Social Responsibility). Why are more and more companies voluntarily giving an account of their environmental and social activities? And what possible benefits does such a publication have for large, medium-sized and smaller companies?

Basically, recognition is growing world-wide that customers and business partners are more and more interested in learning about the environmental and social dimension of corporate activities. The number of purchasers and clients who attach importance to environmentally sound and fairly produced goods increases year upon year. This means strong information expectation has become ever-present and cannot be ignored. Credibility, sincerity and transparency are what count.



UN Sustainable Development Goals
© United Nations Global Compact





In recent decades, the pulp and paper industry in particular has been a driving force towards sustainable and fair production. Most companies have their own stories on this. Key words are new systems technologies, guarantee of origin, renewable energies and of course recycling. The great number of national and international certifications with their complete chains of evidence of origin and strict requirements document this impressively.

Benefits of your CSR Report

If you accomplish as many achievements as the paper industry does, you should certainly take every opportunity to publicise it. Admittedly, this involves a lot of effort. But the benefits are substantial.

Externally – more trust, a better image

Presenting your socially responsible activities in a credible way fosters reputation and strengthens business relationships. Paper manufacturers set themselves apart from their competitors and win over new customers who already value, or even actively demand, sustainable and transparent business activities. Particularly important in this context is that relevant verification is often already mandatory before public printing contracts are awarded.

The effect on business partners and investors cannot be underestimated either. Trust that has been strengthened in this way often increases the willingness to become involved in more complex projects.

Employees too can be recruited and retained long-term. The image of their employer is of

particular importance to today's young and motivated individuals. Flashy company cars and bonuses are less and less attractive, but environmentally correct and socially fair working structures are.

And finally there is the digital "can of worms". This descends on us much more quickly than we are able to react to it. Unless, that is, we are prepared and able to counter and provide clarification in a transparent way.

Whether it is consumers, investors, applicants and employees, consumer protection groups or trade unionists, they all want to be convinced and brought on board.

Internally – more knowledge and competitiveness

In addition to the external effect such a report also brings great internal benefits. Working on it provides an excellent opportunity to thoroughly analyse structures and activities within the reporting period and to re-adjust work processes, goals and priorities.

In presenting business activities from the bottom up you become much more aware of the true environmental, social, and economic challenges. This increased focus makes it easier to work on these issues and to establish a position for the future.

Our Sustainability Report

Heimbach and sustainability are inseparable. As suppliers to the paper industry and as a family-owned business we take our social and environmental responsibilities very seriously.

What have we implemented so far within the Heimbach Group, and what goals are we pursuing for the next few years? What is our attitude regarding ethics, workers and human rights or the environment? How sustainable are we in terms of procurement? You can find the relevant answers to these and other questions in our CSR Report, which follows the principles of the UN Global Compact and the UN Sustainable Development Goals (SDG).

We are assessed on a regular basis on EcoVadis, the platform for Corporate Social Responsibility (CSR) and were awarded the bronze medal in 2019. Since it is impossible for us to be satisfied with this we have addressed these challenges more intensively and have improved our processes. We expect a higher rating at the time of our next audit, which is due shortly.

Would you like to know more?

Visit our website and take a look at our Sustainability Report 2020. I look forward to your feedback.

Stefan Körfer

Phone: +49 (0) 2421 802 501
email: stefan.koerfer@heimbach.com



Always keep things clean



How to describe a modern paper machine? A sensitive giant is probably the best fit. In order to have perfect paper at the reel, all components have to work together perfectly and in harmony. In other words every discrepancy, no matter how small, can sometimes have a surprising and detrimental effect on the production process. As is already well known, a good sheet of paper starts in the forming section and to ensure that everything runs smoothly here, the fabric must be kept clean and open for long periods of time. You can find out here just how important the subject of forming fabric cleaning and conditioning is.

The methods essentially differentiate between mechanical and chemical cleaning, each of which can be used alone or in combination. In this article we will deal with the most widely used method, mechanical cleaning.

Cleaning is usually effected with showers and only on rare occasions with brushes or wipes that rub against the surface of the fabric, as they carry a risk of extra surface wear. Did you know that conditioning starts with the choice of clothing?

The design of a forming fabric has a huge impact on how dirty it gets, or how clean it remains.

It is worth taking a look inside here at a fabric with fewer internal crossover points when compared to conventional SSB fabrics. Primoselect, as shown here, benefits from this, as fewer fibres and of course dirt particles remain within the fabric and are transported around the loop. Reduced thickness and low void volume thus help ensure improved former hygiene.

The alpha and omega of H₂O

If you are conditioning clothing, you should definitely focus on the quality and composition of the water used in the process, as this will have a significant effect on the cleaning result. Chemical or thermal influences can lead to the escape of dissolved salts which are deposited on the fabric or even the machine frame. The following applies in connection with cleaning showers: The water jets should be filtered and have the same pH value and the same temperature as the clothing and machine parts



Standard SSB with paired binder yarns and higher void volume



Primoselect concept with only a single binder yarn: Lower void volume, reduced caliper, faster dewatering

that are being cleaned.

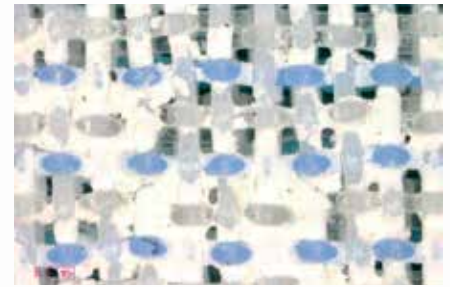
Just as important: The solids loading of the water is a key factor in the choice of nozzle. The more particles there are, the larger the nozzle diameter must be to prevent clogging.

We recommend that you check the nozzles on all showers on a regular basis and replace them at an early stage. Bad cleaning or blocked nozzles can lead to increased local wear as seen below. Here the doctor conditioning nozzles were blocked and

fibres had accumulated on the paper side return roll, wearing out the paper side of the fabric.

Pressure to reach your goals

Nowadays, fabrics consist of several layers: paper side, centre, machine side. In this type of fabric structure, fibres, fillers, salts and stickies can fill up in several dimensions at the same time, which has a negative effect on fabric drainage capability and can possibly also lead to problems in the system.

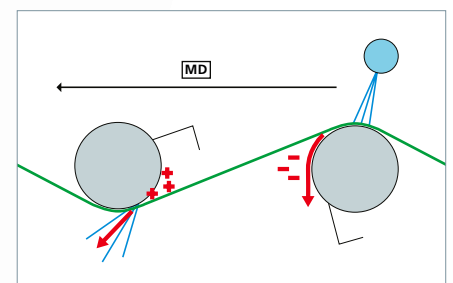
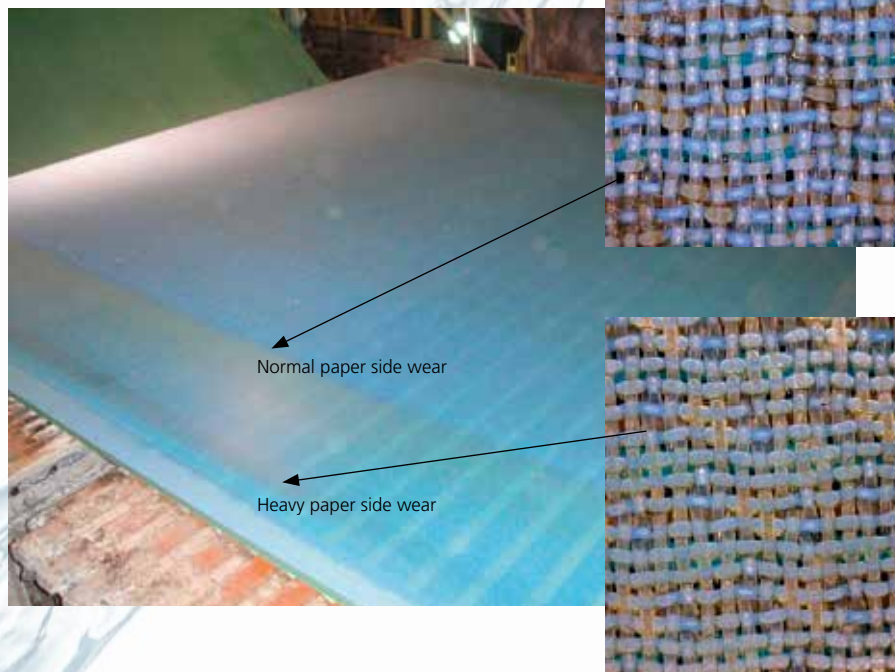


In order for the dirt particles to be effectively removed, a high volume flow or pressure (possibly a combination of both) will be required. In principle, the following applies: The pressure should be as high as necessary so that the deposits are actually removed and not just loosened. At the same time it should be as low as possible, so as to avoid damage to the fabric, and also of course to save energy.

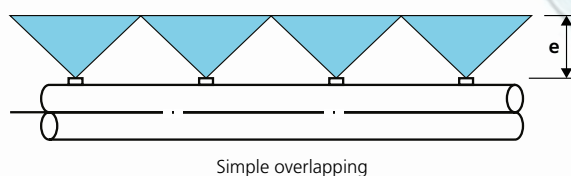
Showers with fan nozzles

Showers equipped with fan nozzles work well – through a combination of wetting and the natural vacuum that is created when the fabric exits the roll. It fills with air and water which flushes loose debris through the fabric. Additional dewatering and cleaning is achieved on the following rolls through overpressure that occurs when the roll and fabric converge.

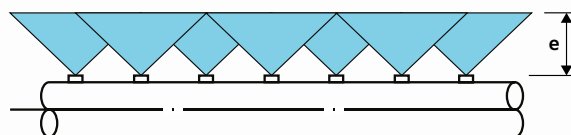
This works particularly effectively with thin fabrics with few crossover points such as Primoselect.



For optimal cleaning results it is critical that fan nozzles overlap correctly which enables the fabric to be wetted evenly. This is necessary because uneven cleaning can cause premature fabric wear and sheet formation can also be disturbed by the presence of dirt particles.



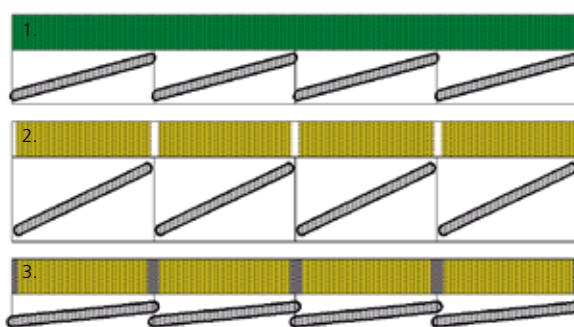
Simple overlapping



Double overlapping

ND Shower overlapping
© PMS

The fan nozzles should be aligned on the machine side of the fabric. Typical water pressure should be between 10 – 15 bar and distance between nozzles should be 100 – 300 mm.



1. Good profile 2. Dry streaks 3. Wet streaks

Presentation of flat jet nozzles
for an even application of water
© PMS

High Pressure shower

Positioning and set-up

The set-up of the nozzles is of critical importance when ensuring that every dirt particle is removed.

- Choose a jet with laminar flow.
- This must be located approximately 100 mm away from the fabric and slightly rotated into the run direction.
- The cross direction traversing speed should be one nozzle diameter per revolution.

The left photo shows a shower pipe on the front side: All nozzles are in excellent condition, the water jet is laminar. The photo on the right shows the same shower on the drive side. Here some nozzles must be damaged or partially blocked whereby the jet is turbulent. By this we mean that the jet dissolves into individual particles before it hits the screen surface. The cleaning effect is low and there is also a risk that paper side yarns will be suffer damage.



Optimal, laminar water jet



A turbulent jet is evidence of defective nozzles

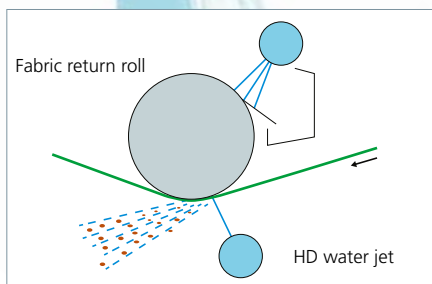
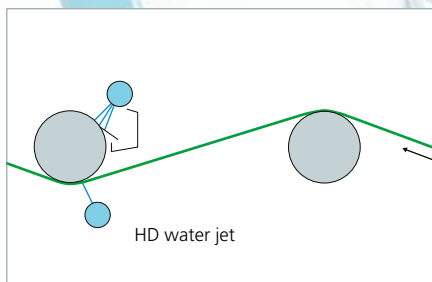
It is advisable to check the quality and condition of the water jet on a regular basis in order to identify and correct any changes in good time. In the case of defective, dirty or even partially clogged nozzles, the water jet will be compromised, which can lead to poor CD profiles of the sheet.

Position of the showers

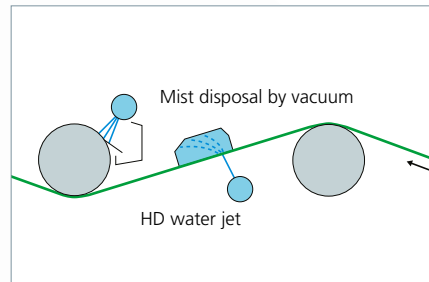
How and where high-pressure showers are located plays a major role - both with regard to the cleaning effect and to prevent further contamination. Some systems have both machine-side and paper-side high-pressure showers. More often though, there will be a single shower located on the paper side of the fabric.

Typical arrangements are:

a) Shortly before a return roll: This is where the water can most easily penetrate the fabric. The narrowing gap between the roll and the fabric pushes the water and contaminants back again through the fabric and out of the paper side.



b) Between two deflector rolls and underneath a mist removal box. The latter is designed to remove both water spray and contaminants.



In the case of top formers the shower water is commonly directed into a Uhle box area where both water and contaminants are collected and washed away.



Topformer



Example of a modern cleaning device

High-Tech Cleaning Equipment

Modern high-speed gap former machines place particularly high demands on cleanliness. Together with increasingly advanced plant technology, there are now many alternative types of cleaning units with single or multiple nozzles that traverse the entire width of the forming fabric. Compared to high-pressure showers, they consume significantly less water.

Conditioning, like choosing the right design of clothing, is a very complex topic. It pays off twice and should by no means be neglected: After all, it is much easier to keep a fabric clean in the first place than to clean a dirty fabric.

In this article, we have limited ourselves to the essential aspects and have hopefully made it clear how important this operation is for the entire production process.

You can get more detailed information and specific support from your Heimbach contact.

Safely the highest performance

The impressive seam felt success story dates back all the way to the 1980's.

It is not only a question of quality and performance; the safety of all those involved with the paper machine is increased as Heimbach constantly develops its' seam felts.

With New Technology products, changing felts is becoming easier than ever.

In March 1981 vehicle safety was re-invented. At the Geneva Motor Show in that year, Mercedes-Benz became the first automobile manufacturer in the world to present the airbag and belt tensioner restraint systems in a series-model motor car to the general public. Today it is impossible to imagine a car without these two technologies in it.

Around this same time, a similarly revolutionary innovation was developed for the paper industry: seam felts. And this success story is in many ways just as impressive. Globally, every fourth felt sold is a seam felt, in Europe this becomes close to every second.

There are many good reasons for this. As with the vision of impact protection, safety was also a fundamental idea where seam felt technology was concerned.

Simplified felt changing procedure

The technique of cantilever beams clamped in on one side, often referred to as the cantilever technique, made changing press felts much easier. Framing components of the press section could be opened on one side and the complete removal and re-installation of press rolls was rendered superfluous. With the introduction of seam felts the process was further simplified so that cantilever technology could be partially, or even completely dispensed with. Installation of seam felts requires a certain amount of care and precision. In order to close the seam zone good access to the felt must be provided, which is often available in the vicinity of the tension and guide rolls. There is usually enough space here to join the two ends of the seam. Endless felts have to be drawn in sideways or at right angles

to the run direction – a strenuous and demanding undertaking which requires manually pulling from the drive side.

Comfortable in every way

Seam felts can be brought into position by means of automatic roll-up and pull-in devices which results in minimal manual intervention and thus reduces the risk of injury. Heimbach has always oriented itself towards the needs of papermakers in its' further development of seam felts.

It is clear that the quickest possible resumption of production with maximum comfort and the highest safety levels are more important now than ever. In an ideal world, New-Tech press felts can even be installed with the shoe press closed; „self-loading“, as it were, into position. Over the course of time, the available accessories



Some manufacturing stages are carried out by hand with great precision and care



Application Specialist Frank Barthel demonstrating Easy Edge

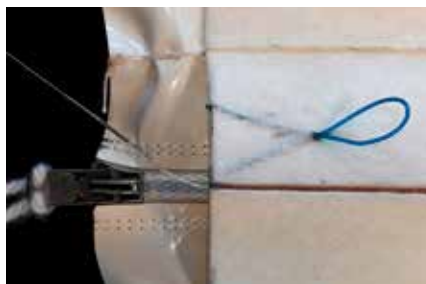


Easy Zip

have become increasingly user-friendly. Two examples of this are Easy Zip and Easy Edge.

Easy Zip

As with Dryer fabrics, seam felts are installed with the help of pull-in aids (pull-in pieces or kites that are attached across the width of one end of the felt) before both seam ends



Easy Edge

are joined together precisely and without tension. During this step, additional retaining clips with rope safety devices are often attached to the ends of the felt to prevent slipping, in order to hold the felt firmly in position. With Easy Zip, the time-consuming attachment of the additional clips is a thing of the past.

Easy Edge

A clearly marked pintle wire placeholder is attached at both edges of the felt. It marks the position for the return of the pintle wire and facilitates the re-connecting process by means of pre-defined channels.

Easy Edge means that the execution of seam closing can be standardised and allows seams to be quickly closed both safely and permanently even in sub optimal conditions such as poor lighting.



Construction Engineer Frank Zils drives the development process forward



Preparing the closing aid



Quality of seamed and endless felts is the same

Risk reduction was, however, only one of the points in the catalogue of requirements. How do we manage to match the gains in occupational safety, and start up times with a similar improvement in production quality? This question also pushes us forwards as clothing experts. With industry requirements to increase performance and quality always in our minds, materials and processing methods have been continuously optimised.

Frank Zils, construction engineer, sums up: „The beginnings of seam felt production were shaped by the fact that the weaving process to form the eyelet required relatively thick materials. Today, finer monofilaments and additional reinforcement yarns are increasingly used in the seam zone. Seam felts are also proving effective on more demanding paper grades. With regard to materials, heat-setting and needle technology, the processes have undergone substantial improvements. In the meantime, from a qualitative perspective, seamed and endless felts are equivalent in many applications.

We have also ushered in a new era with our multiaxial structures and base layer combinations. A wide range of design options offers maximum safety and freedom from marking in the various positions of the machine. “

No trace of marking

When it comes to the key point of freedom from marking, it is worth revisiting possible concerns. Just as the first airbag was subject to continuous development, becoming in the process increasingly intelligent and sophisticated, seam felts today bear only a limited comparison to the first generation.

Concern about marking is understandable, but nevertheless unnecessary. With the targeted incorporation of additional or replacement yarns during production, the seam has been optimised to such an extent that it is effectively unnoticeable in use today. Even with the latest carrier constructions using multiaxial, or a combination of multiaxial and non-woven technology, the seams effectively form a homogenous transition in the felt structure. So no trace of unwanted marks in the paper.

Highest seam strength. Hands down!

Some people require clarification on the subject of seam strength or durability. Research and progress have long since started a new chapter on this topic too.

Fixation and needle technology are now considerably more advanced. Provided that they are correctly applied and installed, seam felts today offer comparable performance and lifetime to endless wet felts.

Production processes for seamed and endless felts are both controlled and monitored by modern technology – the basis for consistently high quality. Key stages in the manufacturing process of seam felts, which require experience and extensive know-how, are carried out by specially trained staff.

A final quality control, including a „trial closing“, ensures that the seam has been constructed with the utmost care and precision.

In short: Seam felts will reach the same running times as endless versions.



Pintle control



Checking the eyelets

Would you like ...

- ... seam felts, that can be changed quickly and safely?
- ... to save valuable time, money and stress?
- ... a seam that is easy to close?
- ... individual pull-in and closing aids?
- ... felts that remain open for longer?

Then ask your contact person about **Connect!**

Cleaning the seam area



In profile

Many paths converge at Heimbach 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.



Feng Mo

Sales Director China Area

„Being different makes all the difference.“

Never stopping

Immerse yourself in the machine. Understand. Lend a hand. Build up a qualified and competent team. Solve problems and get maximum performance. That is exactly what Feng Mos Ding does. The qualified electrical engineer has been Head of Sales and Service at Heimbach Fabrics Suzhou for more than two and half years now. With 27 years of Sales and Management experience in the Paper, Safe and Computer industries Feng knows and understands the complex demands of the industrial side of these businesses like few others. Hightech and top production, with our man in China you can always rely on Heimbach there too.

By background: Electrical Engineer

At Heimbach: Since January 2018

Field of activity: Sales Director China Area

Milestones: Over the course of just under three decades, Feng has successfully established and managed numerous multi-national teams within the paper and computer industries.

In private: Travel the world, get to know new cultures and marvel at the wonders of nature.



Ruben Alejandro Mosquera García

Strategic Product Manager Drying
Heimbach Group, Head of Product
Management Heimbach Ibérica

„Strive always for the highest goals. More importantly: Choose the best way to enjoy the trip.“

Made for us

If anyone understands the paper-maker, it is him. Ruben Alejandro Mosquera has been with Heimbach for 33 years. Ruben is a Mechanical Engineer and fully qualified expert in pulp and paper. He has everything that is needed to respond in the best way possible to customer needs. His previous experience in earlier positions at Exxon chemicals in the USA and as a Professor at the Metropolitan University in Caracas continue to bring benefits.

By background: Mechanical Engineer, Master of Science Pulp and Paper

At Heimbach: Since 1987, Area and Product Manager in Venezuela, Spain, Portugal and Northern Latin America

Field of activity: Responsible for International Product Strategy, for Dryer Fabrics and for Product Management at Heimbach Ibérica

Milestones: Various successful development projects combining Textile and Paper worlds

In private: Ruben was involved in Motor Sport and Racing. As a two-time National Rally champion, he rarely misses an event on TV. At weekends he and his wife enjoy trips around the country on his vintage Motorcycle.



Stefan Körfer

Sustainability and Innovation Manager
Heimbach Group

*„Doing is like wanting,
only more extreme.“*

Keeping an eye on what is new

Another Heimbach veteran. For over 25 years, Stefan Körfer has been a lynchpin of numerous key projects at our Düren location. He is our specialist in fibres, batts, and all aspects of needling. Spanning two decades, Stefan has played a major role in driving product development. In the last four years he has fulfilled the position of Innovation Manager and Research Project Manager. Since 2016, the function of lean process facilitator was added. Going forwards from the start of this year, Stefan has been responsible for the important topic of sustainability.

By background: Textile machine engineer, Dipl.-Ing Textile Technology

At Heimbach: Active Group-wide in various functions since 1995

Field of activity: Sustainability and Innovation Manager

Milestones: 21 years in Product Development, responsible amongst other projects for market introduction of Atromaxx / Atrolink / Laser bonding

In private: As befits a sustainability manager, Stefan likes to spend his time close to nature. That may be in his ecologically developed garden at home, in the mountains or by the sea. Another place you are likely to meet him is on the squash court.



Sven Bauchmüller

TASK Manager

*„If you happen to fall,
never stay lying down.“*

Gremlins fear him

Always pushing for the maximum. Always by the customer's side. That is what Sven Bauchmüller is passionate about. Sven took over the management of our TASK department six months ago. Before that, he worked for many years in tissue production, initially as a machine operator and later on as a Production Manager. Wherever there is a problem, where downtime is affecting production and efficiency and quality needs to be improved Sven and his team are there to get to the bottom of things. As a cutting machine operator and experienced paper industry foreman he has a highly trained eye for fine technical details.

By background: Trained cutting machine operator, Gernsbach Industrial Foreman paper production

At Heimbach: Hot off the press, since March 2020

Field of activity: TASK Manager

Claim: „I want to be open to new experiences and to combine this with my previous expertise. It is only through this that I can give my best to Heimbach and to our customers.“

In private: To make up for the time he spends away on business, Sven likes to be out and about in nature, either on his bike or walking with his Australian Shepherd dog.

Thanks for the vote of confidence



Palm



BURGO
GROUP

Start-up clothing Palm Aalen PM5

In June 2019, the ground-breaking ceremony for a gigantic new project took place in Aalen-Neukochen. 500 million Euros would be the investment in a factory meeting the very highest of technological standards at the headquarters of Palm Group.

The centrepiece, a new PM 5, will replace three existing, smaller corrugating base paper machines when it starts up making corrugating base papers from Spring 2021. With a wire width of 11,70 m and a

target speed of 1800 m/min it will be the fastest and widest containerboard machine in the world. The annual capacity of 750,000 tonnes equates to double the weight of the Empire State building. Heimbach was selected as a co-supplier and service partner for forming fabrics, press felts, shoe press and transferbelts.

This project represents a Herculean task for everyone involved. We are happy and proud to be playing a key role in the supply of clothing.



Rebuild of Burgo Verzuolo PM9

The rebuild of PM 9 at Italian paper producer Burgo's Verzuolo mill was also a mammoth project that was the subject of much attention. At the end of 2019, the machine that had previously produced coated magazine papers was converted to make corrugated base paper from recycled papers. Current capacity is now 500,000 tonnes per annum. Thanks to a wide range of references from similar conversion projects, Heimbach was already involved in the planning phase. With the clothing package selected for the press and dryer sections, dryness at the nip rose from 49% to an incredible 57% during the test phase.

The right product mix is certainly one thing, trust and good cooperation is another. Throughout this project, cross-border teamwork went extremely well.

The annual tonnage capacity of PM5 at Palm Aalen is roughly equivalent to double the weight of the Empire State Building

An industry reinvents itself

Germany is meant to become climate-neutral by 2050. This is an ambitious goal, which certainly places heavy expectation on the paper industry. A model factory is set to provide new technological advances in terms of designing more sustainable processes. And this is happening in Düren, the home of Heimbach's headquarters.



The model paper mill is to be located in Düren (© WIN.DN GmbH)

You cannot reinvent the wheel.

What about paper? At least in its manufacturing there is still a lot of scope for modernisation. Worldwide the sector has been taking steps for a long time in order to meet the growing demands on energy efficiency and sustainability.

As a rule, however, the innovation cycles tend to be very long. This begs the question of how far you can depart from today's production basis without economically overburdening companies. How much can you invest in climate-neutral production technologies in the face of exploding energy and CO₂ costs? Finding the best way to achieve this is more or less equivalent to squaring the circle.

A generational collaborative undertaking

The model paper factory aims to provide new answers, opportunities and methods. With ecological realignment in view industry representatives, universities and institutes met in the autumn of 2018 with the aim of pooling their concepts and strengths for this generational undertaking.

It is clear to all concerned that optimisation and adaptation measures alone are no longer enough. A collaborative effort is needed in order to integrate the paper industry of the 21st century in an industrial „ecosystem“.

To achieve this goal digitalisation plays a key part. One focus will therefore be on

the deployment of new forms of artificial intelligence. The model factory to be built would after all have to reflect the changing world of work and include the qualification of specialists.

Various sites applied for this trail-blazing project. In the end Düren in North-Rhine Westphalia was awarded the contract. Paper making has always been a part of the town's DNA. At the same time the neighbouring areas boast a high density of universities plus the renowned Research Centre Jülich. So much accumulated know-how in one region promises both momentum and synergy.

The scientific groundwork for this technology of the future is set to start as early as this autumn. It will, however, take a few more years until the new gates are open to interested parties.



Heimbach TASK

Process expertise and tailored solutions

Even small improvements in and around the paper machine can often release great savings potential. Your products can be enhanced by maximising production efficiency and keeping maintenance costs to a minimum. Place your trust in our technical know-how and sound service competence that provide effective support in optimising your processes.

See for yourself our well-established expertise and extensive technical service portfolio, including:

- Nip Profile Measurement
- Speed Measurement
- Thermography Measurement
- Troubleshooting

task.
Technical Assistance,
Service and Know-how

www.heimbach.com

