

impressive

ISSUE 2/2021

P for Packaging and Partnership

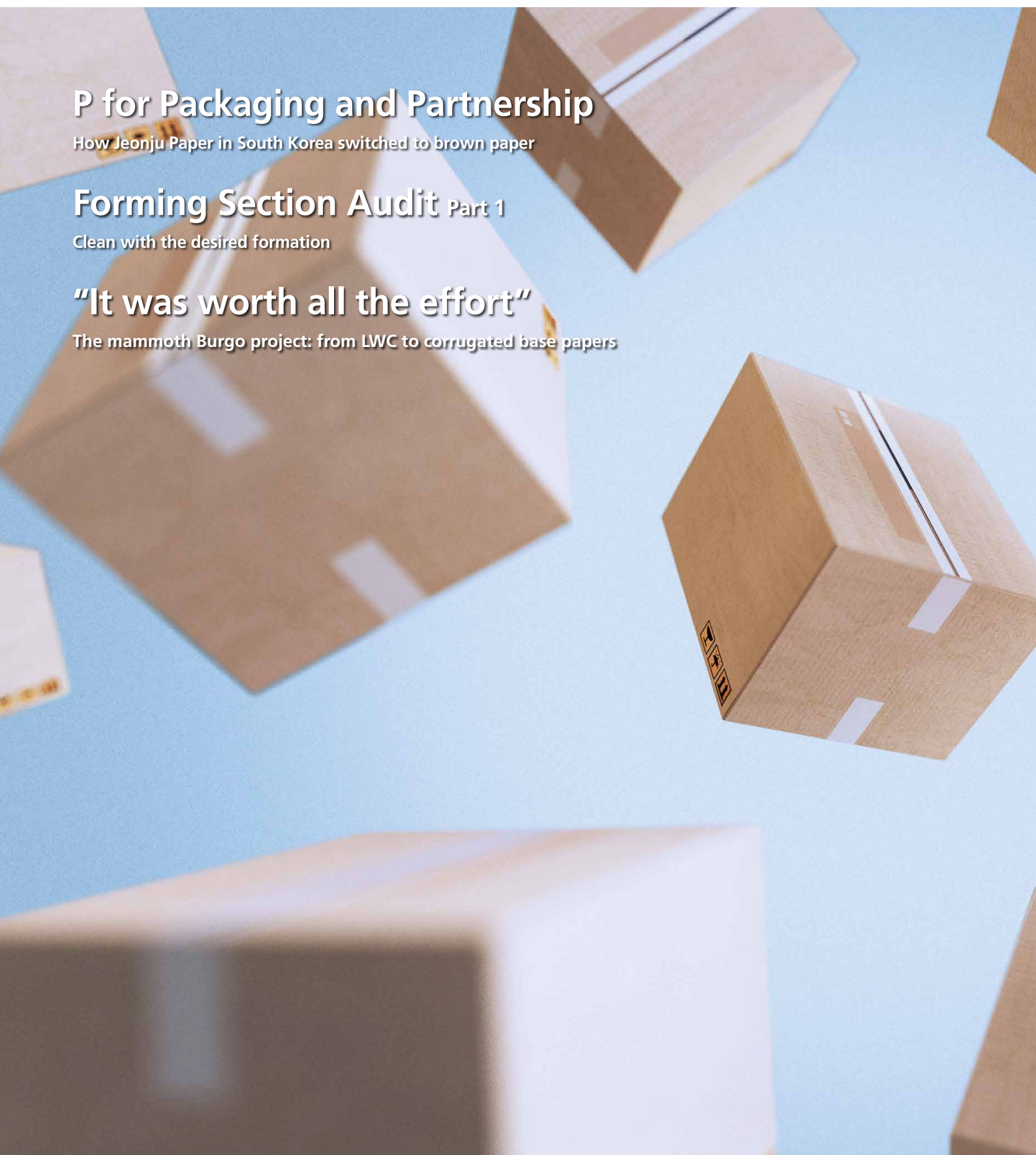
How Jeonju Paper in South Korea switched to brown paper

Forming Section Audit Part 1

Clean with the desired formation

"It was worth all the effort"

The mammoth Burgo project: from LWC to corrugated base papers



03
Investment and Innovation

Exceeding customer expectations

06
Italy – A Paper Nation

At the forefront of packaging and tissue

07
“It was worth all the effort”

Burgo: from LWC to corrugated base papers

10
Forming Section Audit – Part 1

Clean with the desired formation

16
P for Packaging and Partnership

How Jeonju Paper switched to brown paper

20
In profile

Four “Heimbachers” introduce themselves

22
References that convince

Top performances with top clothing

23
Anything but an environmental dinosaur

Sustainability award from DINO

Imprint

Publisher

Heimbach GmbH
52348 Düren
Germany

Phone.: +49 (0) 2421 / 802 0
email: info@heimbach.com
www.heimbach.com



Annotation:

This issue contains group photos
taken before the pandemic.



Dear Reader,

The market for paper is subject to constant change. Advancing technical developments are making possible new and more efficient ways of communicating. These make the times when magazines were an integral part of our everyday lives, and publishing houses no longer knew where to accommodate all the ads that were placed, simply fading memories. These are, as a result, tough times for paper producers whose main markets consist of these types of product. But it would be a mistake to think that the paper industry is now doomed to failure. For sure, we are experiencing a radical upheaval, but in addition to presenting major challenges this also opens up countless opportunities and overall offers positive prospects.

In fact, more paper than ever is being produced – though instead of newsprint and fine paper the bulk of this is now packaging papers, which have been booming since before the Corona pandemic. It is precisely because of these inevitable shifts in paper consumption that many of our customers are being forced to adapt their plants to the changing market situation by means of rebuilds.

Our experts have already been involved in numerous such conversions and have supported our customers in setting the right course at an early stage in the rebuild process. Here experience and know-how, in combination with the perfect selection of clothing, make the difference and can bring measurable customer benefits. In this issue, we report on two such successful projects in Italy and South Korea.

You can also find out why we have invested significantly in both capacity and technology in recent months, and why you can always rely on us!

Best wishes

Marco Esper

Chairman of the Management Board (CEO)

Investment and Innovation

Alongside the Pharmaceutical, Automotive and Chemical sectors, Paper has the highest investment rate of all industries. Heimbach is also putting money into expanding its production capacity and responding with even more flexibility and speed to individual customer requirements. Last year, despite Corona, we increased our overall Atromaxx weaving capacities by a total of 20 per cent through investment in China and Germany. This expansion programme will continue through 2022. At the same time, a new facility for coating transfer belts was commissioned at our Headquarters in Düren and laser bonding was optimised.

When the giant freighter “Ever Given” blocked the Suez Canal in March, it suddenly became very clear just how fragile global supply chains actually are. As part of our goal to ensure that production in paper mills never comes to a standstill, Heimbach manufactures in a de-centralised way.

So for example, we manufacture the new-tech Atromaxx product group at our Olten, Düren and Suzhou sites. If, therefore, the worst came to the worst our European and Asian customers need not fear any interruption. This security of supply is becoming increasingly important as global demand for the product continues to grow. This is mainly due to the numerous advantages offered to papermakers by the modular design of our multi-axial felt.

Two new weaving machines mean more Atromaxx

Several years after commissioning the world's most modern press felt production facility at our Suzhou site the next expansion phase will now take place, almost doubling press felt capacity at this location. The basis of all our planning and activity is to further improve quality, sustainability and efficiency. And while in many places Corona was stopping the wheels from turning, we set our course for the future during a time of crisis. New weaving machines have recently been commissioned in our Düren and Suzhou plants, adding 20 per cent to Group-wide Atromaxx capacity.

Taking into account massive travel restrictions and quarantine requirements, it was

particularly tricky to set up the new plant in China. Our cross-border teams successfully overcame this challenge through 100 % virtual installation and commissioning. And this is by no means the end of the story. Heimbach is planning further investment in the Middle Kingdom by 2022 with a final press felt production expansion. The central element of this is an ultra-modern heat-setting calander coupled with a new heating concept and a closed washing water circuit with integrated wastewater treatment plant.

In view of these recent and up-coming measures on both continents we can already make this promise: We will further increase your security of supply and also make a significant contribution to sustainability by means of shortened distances.



Commissioning the new weaving machine at our Suzhou site



Nina Kogel from Product Development points out the "black lines"

Further additions in Laser Bonding

Increasing production capacity cannot yet be considered an art – but improving quality at the same time is. That is why, in parallel with the new weaving machine in Düren, we have also optimised laser bonding and expanded the plant.

Heimbach has been using laser bonding technology for 15 years already, in order to permanently bond the individual carrier components in Atromaxx. This process gives

the felt a very homogenous modular bond with extremely high stability and mechanical resistance. Press felts produced using this process also exhibit maximum flatness. Sheet breaks and creasing are eliminated in advance by means of laser bonding.

The high-precision joining process creates an even surface in the joint zone. A basic pre-requisite for this is the employment of a high-tech process, the result of which is visible as a black line after bonding. Do not worry, this does not affect either drainage or running properties. On the contrary, it should be considered as a seal of quality.

Expansion of Webmover production line

There is further news from our Düren plant: At the beginning of this year, we modernised the Webmover production process with the addition of a new coating line. This enables us to respond with even greater flexibility to individual customer requirements.

As more and more application fields open up for transfer belts, for example speciality and lightweight papers, further development of existing and also new product properties are continually required.

This project showed very clearly just how valuable experience can be. The majority of people involved were already present in 2006 when Webmover was first introduced. The extensive knowhow of our production team and machinery builder enabled us to get the project over the line both quickly and smoothly.

Speaking of fast and smooth, for all the improvements we make in our production we are driven by one desire above all: To be able to continue to supply you with high-quality clothing at any time and any place as a reliable partner to the paper industry. Our efforts mean that we are even better positioned than before for this.



Well coordinated and flexible Webmover team: Even their working hours are matched to delivery requirements

My time in China – a personal enrichment

Melanie Mons from our Product Development team played a major role in the smooth and successful commissioning of the new weaving machine at our site in Suzhou. Working together with our Chinese colleagues, the project was completed within a short time frame. Melanie is a true "Heimbacher", having completed her apprenticeship at the company. Her education and training has followed only one direction – upwards. She remains fascinated by textiles – after all, everything begins with a fibre...



"China was and still is an indescribable enrichment for me. I am grateful to be a part of this team – both professionally and privately. Communication both on site and from afar works extremely well and I look forward with great enthusiasm to the upcoming projects."

09/2002 – 06/2004

- Apprenticeship as textile machine operator for nonwovens.
- Graduation with an overall grade of "very good", best in the state of NRW working later as a machine operator and dispatcher in the needle mill

10/2005 – 12/2008

- Further training to become an industrial textile foreman

08/2008 – 12/2010

- Apprenticeship as textile product tester within the scope of a dual study programme in the field of textile engineering/textile technologies.
- Graduation with an overall grade of "very good", best in the state and region of NRW

08/2012

- Graduation as Bachelor of Science in textile technology, focus on textile technologies
- Since then in the Research and Development Department

10/2016 – 03/2017

- Commissioning Pressing 2.0 in Suzhou
- Since then 1-2 times a year for project co-ordination and training at the China location



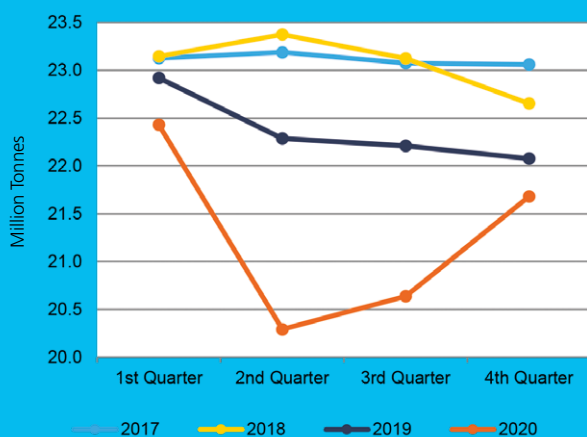
Heimbach Suzhou

Italy – A Paper Nation

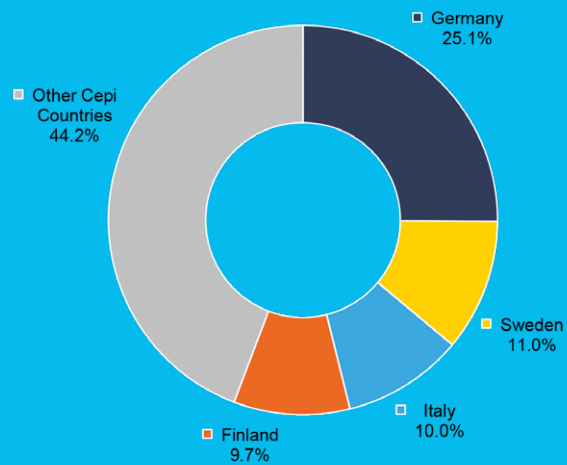
Italy and pizza are of course inseparable. And pizza boxes are increasingly coming out of Bella Italia too. The southern European country has long been one of the continents' largest producers of liner and cartonboard. In 2020 alone, 4,8 million tonnes were produced – placing Italy in third place behind Germany and Sweden. Italy also ranks third in Europe for overall Paper and Board production, with a total of 8,5 million tonnes produced there last year. In the tissue segment, Italy took the number one position - with 1,6 million tonnes – just ahead of Germany.

But let's go back to packaging. In Italy, as almost everywhere else, the market is booming – and paper manufacturers are responding to this. In the following interview, mill manager Raffaele Marinucci reports on the rebuild of PM9 at Burgo Verzuolo.

Total Paper and Board – Quarterly production



Main producers



Total Paper and Board

| '000 Tonnes | First Quarter | | Second Quarter | | Third Quarter | | Fourth Quarter | | Cumulative | | % change 2020/2019 |
|----------------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------------|
| | 2020 | 2019 | 2020 | 2019 | 2020 | 2019 | 2020 | 2019 | 2020 | 2019 | |
| Austria | 1 283 | 1 223 | 1 059 | 1 257 | 1 147 | 1 244 | 1 224 | 1 260 | 4 713 | 4 985 | -5.5% |
| Belgium | 457 | 467 | 349 | 394 | 384 | 449 | 420 | 455 | 1 610 | 1 766 | -8.8% |
| Czech Republic | 235 | 223 | 235 | 226 | 231 | 226 | 192 | 207 | 893 | 882 | 1.2% |
| Finland | 2 102 | 2 576 | 2 038 | 2 385 | 2 019 | 2 409 | 2 049 | 2 355 | 8 207 | 9 724 | -15.6% |
| France | 1 760 | 1 910 | 1 695 | 1 868 | 1 690 | 1 764 | 1 725 | 1 781 | 6 871 | 7 323 | -6.2% |
| Germany | 5 608 | 5 630 | 5 022 | 5 463 | 5 220 | 5 536 | 5 503 | 5 444 | 21 353 | 22 073 | -3.3% |
| Italy | 2 256 | 2 273 | 2 094 | 2 328 | 1 997 | 2 145 | 2 189 | 2 154 | 8 535 | 8 901 | -4.1% |
| Netherlands | 752 | 720 | 667 | 716 | 723 | 725 | 728 | 734 | 2 869 | 2 895 | -0.9% |
| Poland | 1 277 | 1 213 | 1 172 | 1 232 | 1 194 | 1 186 | 1 291 | 1 244 | 4 933 | 4 875 | 1.2% |
| Portugal | 559 | 536 | 399 | 531 | 508 | 552 | 529 | 519 | 1 995 | 2 138 | -6.7% |
| Romania | 168 | 177 | 166 | 160 | 169 | 174 | 167 | 167 | 669 | 678 | -1.3% |
| Slovenia | 188 | 187 | 170 | 184 | 173 | 182 | 174 | 179 | 706 | 732 | -3.6% |
| Spain | 1 655 | 1 608 | 1 529 | 1 623 | 1 481 | 1 589 | 1 599 | 1 605 | 6 264 | 6 425 | -2.5% |
| Sweden | 2 537 | 2 531 | 2 219 | 2 319 | 2 234 | 2 395 | 2 341 | 2 371 | 9 330 | 9 616 | -3.0% |
| United Kingdom | 952 | 974 | 871 | 934 | 884 | 986 | 921 | 957 | 3 628 | 3 851 | -5.8% |
| Other Cepi Countries | 641 | 674 | 609 | 668 | 586 | 646 | 631 | 644 | 2 466 | 2 633 | -6.3% |
| Total Cepi | 22 431 | 22 921 | 20 292 | 22 289 | 20 638 | 22 210 | 21 682 | 22 077 | 85 043 | 89 497 | -5.0% |

12 months 2020/12 months 2019: -5.0%

4Q2020 / 4Q2019: -1.8%

4Q2020 / 3Q2020: 5.1%

Source: CEPI PRODUCTION STATISTICS 4th QUARTER 2020

"It was worth all the effort"

Burgo Group is a leading European manufacturer of communication papers, speciality papers and corrugated cardboard. In 2019, the group decided to convert PM9 at its Verzuolo mill from LWC paper made from groundwood pulp to corrugated base paper made from recycled paper. The targeted annual volume is 500,000 tonnes. Heimbach was awarded a contract for the supply of a large part of the clothing required. The new production facility has been up and running since the beginning of last year. Time now to ask mill director Raffaele Marinucci how the mammoth project went and what he thinks of the results.

BURGO GROUP

Mr Marinucci, rebuilding a paper machine is a huge project. The time pressure was probably even greater than the cost pressure. How are you doing today?

We are proud of what we have achieved. The rebuild demanded a lot from each and every one of us. In a time that was not easy anyway, we had to familiarise ourselves with a completely new stock preparation system and could not always rely on external support. However, when I look at the result achieved, I can only say: we did a good job and it was worth all the effort. Last year we already produced more than half a million tonnes of corrugated base paper and positioned ourselves even more strongly as a supplier of particularly sustainable packaging materials.

We are pleased about this – not least because our products are a part of this success story. How did the cooperation with Heimbach come about?

We knew that Heimbach had already successfully accompanied several conversion projects and had excellent references. Before we got more deeply involved in the planning, we visited a comparable paper machine with similar production together with the Heimbach personnel in France and exchanged experiences. Heimbach's concept of nip

dewatering for packaging machines is clearly different from others and the benefits absolutely convinced us. The results achieved in this reference project in terms of running time, runnability and the particularly high dry content after the press section spoke for themselves.

And how have the New-Tech felts performed so far?

Even better than expected. Already in the test phase, we were able to increase the dry content after the nip from 49 to an unbelievable 57 percent. And to think that for many years I believed the sound barrier to be 53-54 percent. Atromaxx felts with their multi-axial structure have significantly increased nip dewatering. And in addition, we benefit from a faster start-up and a controlled high dewatering performance

over the entire felt lifetime – with minimal conditioning.

In order for modern press felts to develop their properties optimally and deliver maximum performance, the base and nonwoven modules must be applied precisely. Can you confirm this?

In every case. Dewatering and drying records are only achieved at the end of a highly detailed coordination process. For example, Heimbach experts analysed our machine and processes precisely in advance and subsequently visited the plant in France together with us. There we were able to see for ourselves in person and during the subsequent return visit we were able to deepen the exchange of knowledge and experience: conditioning, void volume controls at the nip and air bubble issues were just



PM9 at Burgo Verzuolo



Raffaele Marinucci

some of the challenging topics addressed. This cross-border cooperation at customer and supplier level contributed significantly to the success of the project. We were able to reliably reach the planned speed targets and minimise the causes of breaks.

We place a high value on Partnership-based cooperation. How satisfied are you with the support after the start-up phase?

Heimbach has its own team in Italy, led by Robert di Poce. He and his team take care of the continuous service intervals for us and monitor the performance and condition of the clothing. This gives us the information we need at all times to adjust the machine in the best possible way and improve lifetime and operating efficiency. It is good to know that we can rely on



Left to right: Giacomo Gregori (Production Manager), Robert di Poce (Heimbach), Oscar Bravo (Deputy Production Manager)

Heimbach when the need arises. Just recently, an experienced seam specialist from Düren repaired a broken dryer fabric, which paid off for us in both time and money. At the end of the day, these little things make a big difference.

How well prepared is your company for the ever-increasing competitive pressure?

I would say very well. The Burgo Group is one of the leading European manufacturers of graphic and speciality papers and is continuously developing. Our products meet the highest technological requirements and convince with a high-quality standard across the entire product range, from high-performance grades with low basis weights to our packaging papers.

Finally, back to the switch to corrugated base paper. Online retailing is just one driver of the rapidly growing demand for sustainable packaging materials. Increased environmental awareness worldwide is also causing pressure. How do you handle the issues of recycling and water management?

The rebuild project clearly expresses our willingness to take on the global challenge of the circular economy. For this reason, we subject our production waste to a self-contained process to recover fibers and to process and sort the various components of metal and light plastics. With the subsequent recycling, we comprehensively minimise our waste. With regard to water consumption, we have been able to significantly reduce volumes since 2020. All in all, we can say that the rebuilt production fits perfectly with the technologies already installed at the Verzuolo plant and enables us to comply with environmental parameters set at European level.

Mr Marinucci, thank you for the interview and we wish you continued success!



Repair of damaged dryer fabric by Heimbach specialist







Forming Section Audit Part 1

When we talk about the paper machine, we usually distinguish by sections or product groups: Forming fabric, press felts, or press and transfer fabrics, and dryer fabrics. You as a papermaker, on the other hand, are more oriented towards the form of dewatering and often refer to vacuum and press pressure as well as thermal dewatering. So let's roll up the sheet from the beginning and start our article with the forming section. What is needed to get the paper sheet to dewater and form properly? How can long fabric lives be achieved? Why is "former hygiene" so important?



Clean with the desired formation

In the course of a TASK service visit, the forming section is normally “scrutinised” visually. This is the point where it is often noticed that continuous conditioning of the forming fabric and cleaning of rolls in this section are in need of improvement. It is often enough to work with the doctors or low pressure showers so that rolls do not become contaminated in the first place.

To prevent contaminated water or larger dirt particles from damaging the forming fabric, both should be collected and removed via a

saveall (Fig. 1). During a shutdown it is also advisable to clean all forming section rolls

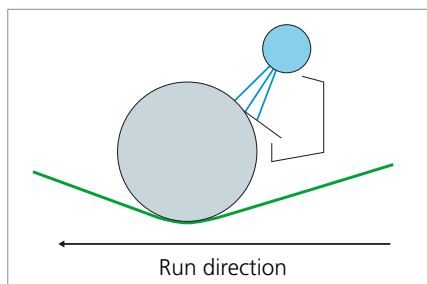


Fig. 1: Cleaning equipment on a guide roll

while on crawl speed, as well as the frame. Otherwise, you may be in for an unwelcome surprise when the machine is back in operation – especially with the appearance of “slugs” in the sheet. Please also make sure that the discharge outlets of the savealls are clear.

All about the correct water jet

If you are looking to clean your fabrics as efficiently as possible, it is important to keep several factors in mind regarding conditioning. Use high pressure showers when the machine is in operation.



Fig. 2: Laminar water jet



Fig. 3: Turbulent water jet

Equally relevant: the water jet should have an unrestricted and laminar flow. Only in this way can its kinetic energy remove dirt from the surface and interior of the forming fabric efficiently and continuously. What is meant by laminar? The jet must hit the surface of the fabric smoothly and with a thin, uniform cross-section – without air pockets and with sufficient pressure (Fig. 2). A turbulent water jet that is broken up into individual particles (Fig. 3) usually makes it impossible to get a satisfactory cleaning outcome. Depending on the water pressure, a non-laminar jet can even damage the forming fabric. A diffuse water jet, on the other hand, can set the warp and weft yarns into permanent motion.

The result is occasional “internal” wear at crossover points (Fig. 4).

The ideal high pressure range: 20 to 35 bar

Please also note: In order to condition the entire machine width, numerous high-pressure nozzles are used, and their condition must be checked regularly. If just one nozzle is defective, dirty or partially clogged this will already affect the homogenous property of the water jet. Uneven conditioning across the wire width and poor cross-machine sheet profiles are often the result (Fig. 5).

As a guideline for setting the pressure, the following should apply: As high as necessary to ensure good cleaning. As low as possible

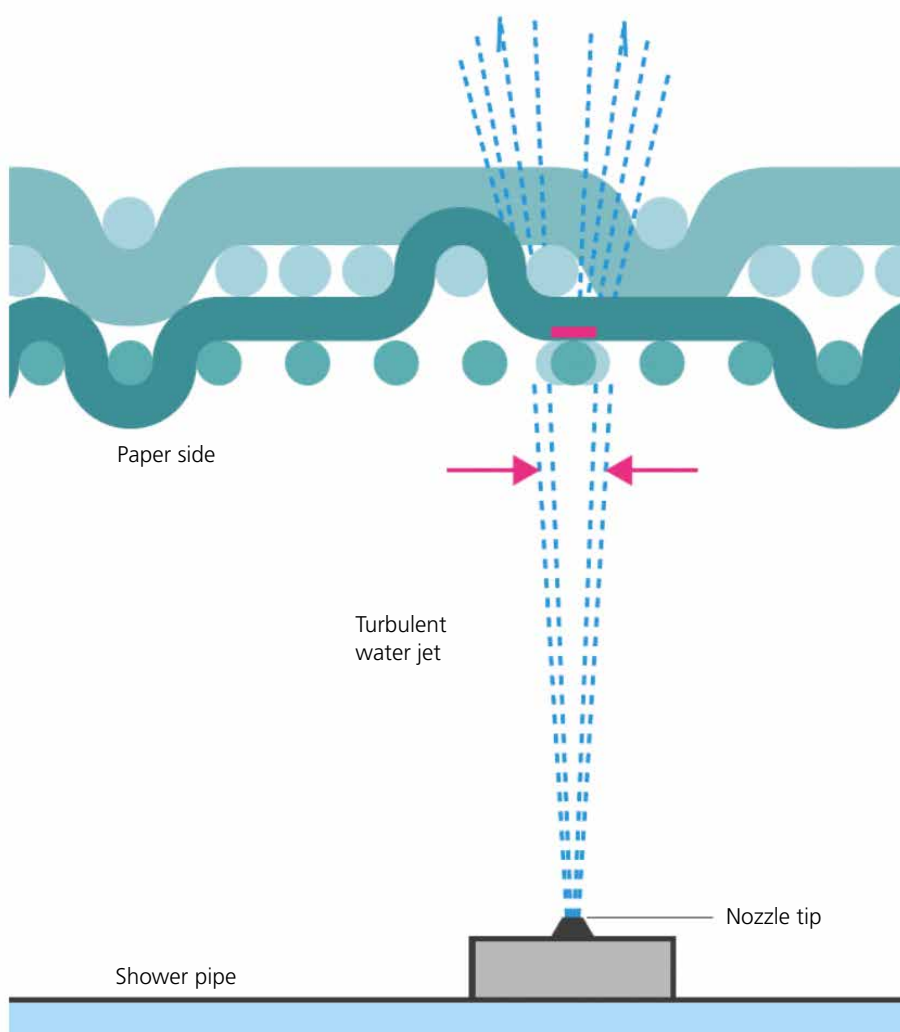


Fig. 4: Potential fabric damage

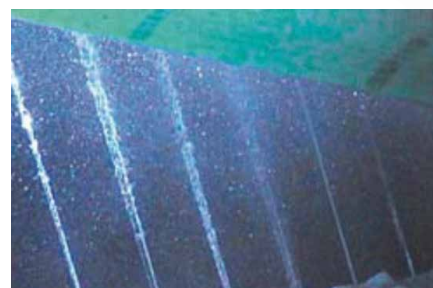


Fig. 5: Various types of water jets

to avoid damage to the forming fabric and save energy. As a rule, we are talking about an ideal high-pressure range of 20 to 35 bar.

The roll of precise shower positioning

The HP showers are often located between two guide rolls on the return run hitting the paper side of the fabric. In this case the water jet should hit the wire at right angles. Part of the water is carried along by the fabric. The rest penetrates the mesh and takes the dirt particles that have been dislodged with it. The water is then atomised by the mesh structure of the fabric and by its' horizontal movement. Water mist is produced in the interior of the fabric circulation. It is essential to collect this using appropriately dimensioned mist removal boxes (Fig. 6). The reason for this is the large quantity of water and foreign particles it contains.

There are also cases where showers are directed against internal rolls on the paper side of the forming fabric. Here the water impinges on the wire at high pressure as it runs on to the internal roll (Fig. 7). The jet penetrates the wire cross-section, hits the guide roll and is immediately forced back out through the wire in pulsation. As soon as the water jet penetrates into and through the wire, fibre, filler and foreign particles are loosened and flushed out. The main reason for this is the "rebound impulse" of the water in the opposite direction – i.e. back out of the fabric. Please pay attention to this process: A portion of the detached particles

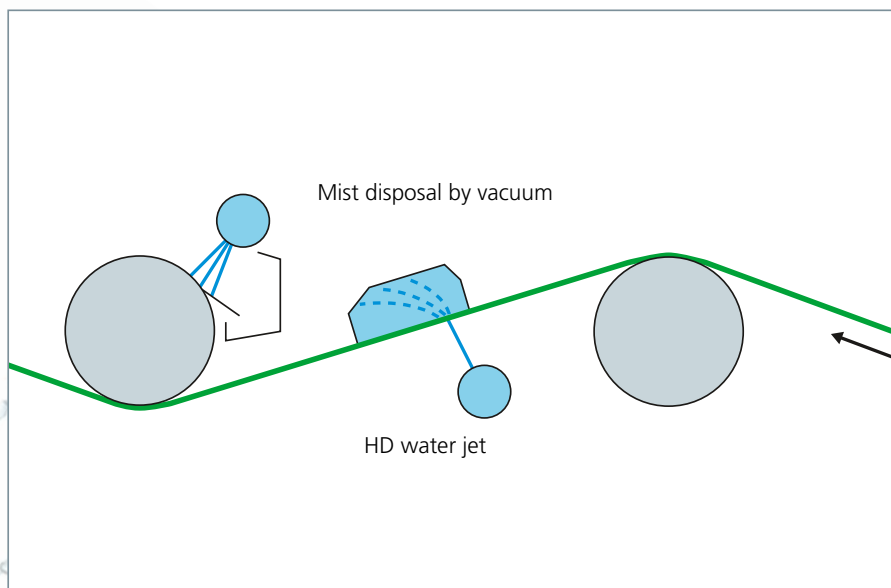


Fig. 6: Usual layout: Water jet between the return rolls

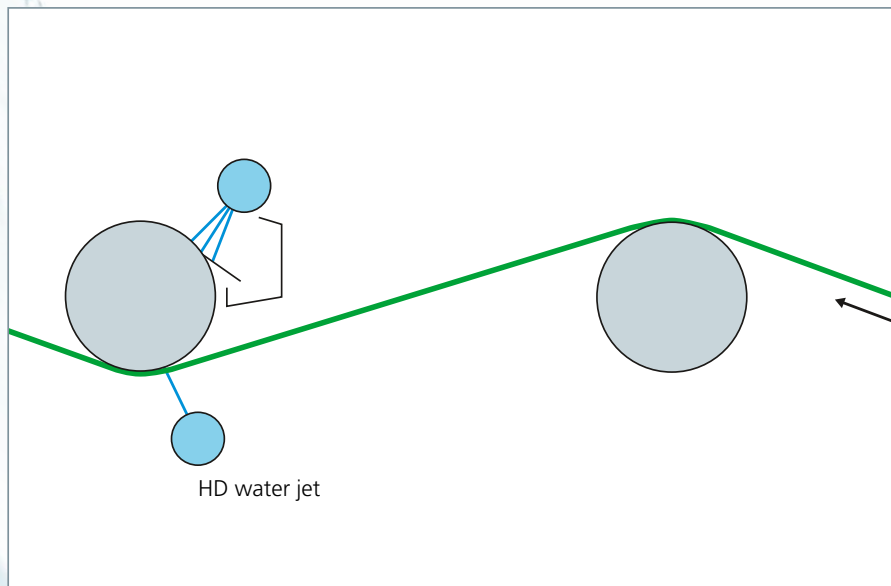


Fig. 7: Variation: Water jet onto return roll

is simultaneously taken up by the roll and is then discharged by a doctor. This latter must be kept continuously lubricated by water (Fig. 8).

There are, of course, combinations of both systems. In any case, the recommended position of the shower is as follows:

Not less than 25 mm or more than 100 mm distance from the fabric.
The optimum angle between the shower and the fabric is 90-100 degrees against the run direction (Fig. 9).



Fig. 9: Ideal angle of the water jets

Speed of oscillation

The spacing of shower nozzles is usually between 50 and 100 mm. Their total number and thus their spacing depends upon the required cleaning intensity. In this context, the two important functional criteria are:

- 1) oscillation – the speed of movement of a nozzle in the cross machine direction
- 2) the uniformity of jet impingement over the entire fabric width

The oscillating stroke should correspond exactly to one or more times the nozzle pitch (nozzle distance). Otherwise, there will be an over and/or under impact on the fabric which manifests itself in streaks (Fig.10).

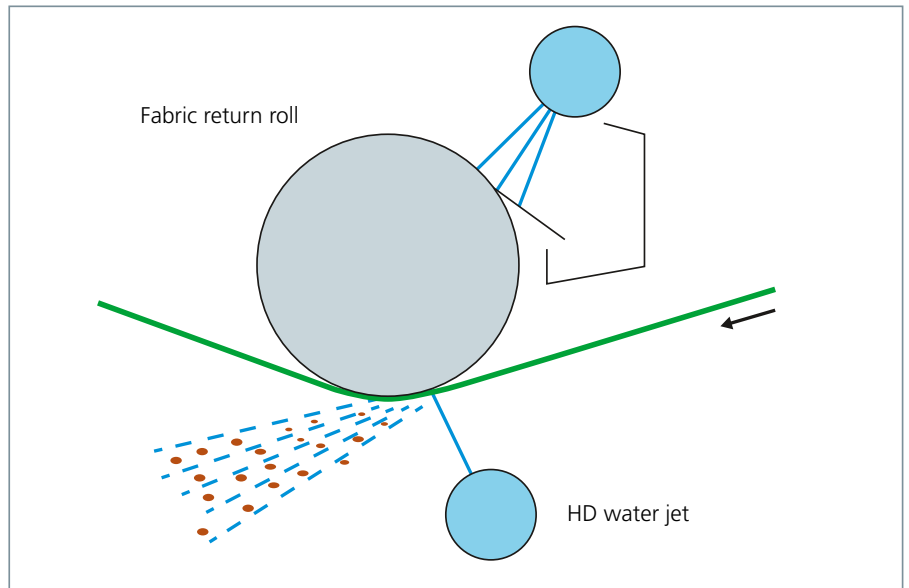


Fig. 8: HD water jet onto fabric return roll

The oscillation feed per fabric revolution must be exactly the size of jet diameter. How fast the shower oscillates is therefore related to the fabric speed and length.

To calculate the correct specifications in mm per second (mm/s) fabric length and speed are used:

$$V_{oz} = \frac{(\text{Fabric speed } [\frac{m}{min}] \times \text{Jet diameter [mm]})}{(\text{Fabric length [m]} \times 60)}$$

This implies that the longer the fabric, the lower the oscillation speed. Also, the slower the fabric speed, the slower the oscillation of the shower nozzles.

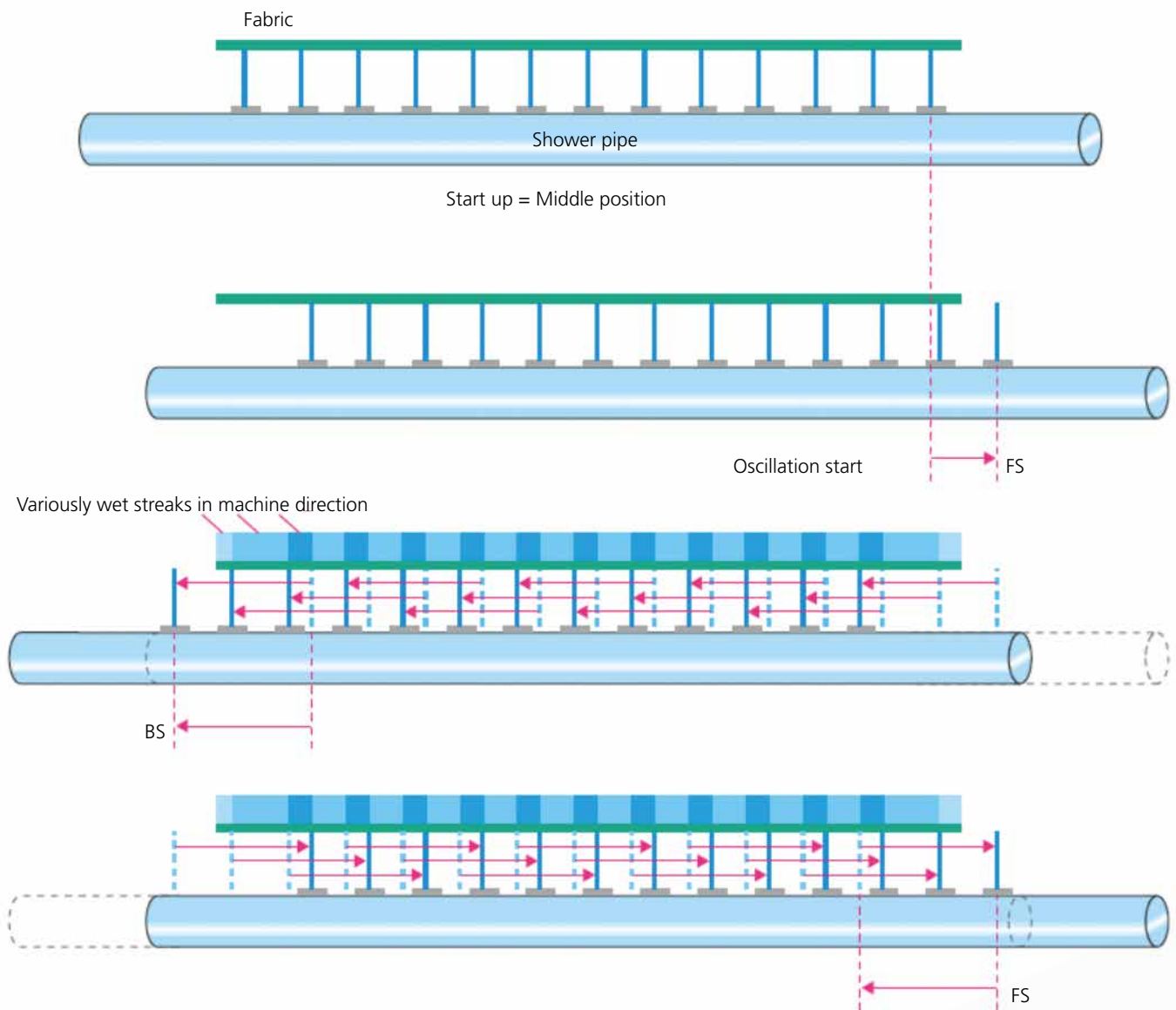


Fig. 10: Example: Wrong oscillation stroke set up

1 Oscillation stroke equalling neither the single nor a multiple value of a nozzle spacing

More information on the comprehensive section audit will be available in our next issue.

Happy to answer your questions

Sven Bauchmüller

Phone: +49 (0) 2421 802 461

email: sven.bauchmueller@heimbach.com





P for Packaging and Partnership

One billion US Dollars. That's how much the annual value of global packaging paper production will rise to by 2024. This is the conclusion of a market research study by Smithers Pira on the global packaging boom.

Even at the starting point of the analysis in 2018, Asia had the largest international consumption of materials such as corrugated board and cardboard, at around 40 per cent of the total.

Our customer Jeonju Paper runs four paper machines 200 km south of Seoul. PM5 was gradually converted to brown paper three years ago: from an initial 20 % to a later 50 %, it now produces exclusively packaging. PM6 produces equal parts newsprint and packaging paper.

Production manager Gyoo-Hun Yeom reports on his experiences.



**Mr Yeom, thank you for your time.
You certainly must have your hands
full?**

That's true. Since the Corona Pandemic demand for our packaging papers has increased even more.

That is great to hear. In 2018, you decided to convert your PM5 to swing production in order to be able to produce packaging paper in addition to Newsprint. How do you see this move three years later?

It was exactly the right time. Having produced newsprint since the mid 1960's – at its' peak two million tonnes per year – the conversion allowed us to adapt our production to the demands of the modern paper market.

Looking back, what was the biggest challenge?

Changing paper grades from newsprint to packaging paper is neither new nor unusual. However, diversifying paper grades is a process where fine-tuning is essential. Thanks to your expertise and experience from similar conversion projects we knew early on what we needed to pay attention to in order to get the maximum out of our customised clothing mix.



TASK team presenting to production personnel in Jeonju



Left to right: Joon Tae Kim (Heimbach), Moonhee Lee (Heimbach), Kevin Kim, Gyoo Hun Yeom

How could Heimbach support you in this?

We also had the great advantage of many years of co-operation. This meant that we didn't have to start from scratch in terms of clothing. The TASK service teams from both Asia and Europe have visited our site on numerous occasions in recent years and in doing so they have become very familiar with the operation of our machines. Thus, from the very beginning of the project, we have

worked hand in hand, listening to each other and exchanging ideas. This was the fundamental pre-requisite for improving our processes and modifying felt designs whilst incurring minimal downtime. The smooth introduction of seamed felts is a good example of this form of close, trusted co-operation.

What product value is important to you in your choice of clothing supplier?

Certainly not just dollars and cents. Although, of course, a competitive price is always important. But what good is the cheapest offer when, for example, the supply chain is not reliable? At Jeonju Paper, we pay the utmost attention to consistent reproducibility. We have to be absolutely confident that the clothing does not deviate from standard characteristics, and rely on the supplier to recommend the best possible solution for our needs.



Heimbach service by Noel Matienzo (left) and Sesung Oh

Talking of new solutions: How have you benefitted from New-Tech clothing?

Heimbach has been ahead of the game in Product Development. Thanks to multi-axial and non-woven press felts, we were able to improve machine performance and produce more economically. Not every trial was an immediate success. However, thanks mainly to good teamwork and deep analysis, we were always able to



Pick-up felt installation on PM7

determine the optimum design. It is not, though, just about the optimal clothing but also about the machine itself. There as well, your colleagues gave us welcome assistance to better understand the air flows in our dryer section. That is partnership for us.

We are more than happy to pass on this compliment. Finally, a look ahead. What do you expect from Heimbach in the future?

Jeonju Paper has a long and proud history in the South Korean paper industry. We have been producing since the 7th century. Tradition is very important here. But we can also see that the newsprint market is shrinking and that modern paper production is changing. For us, reliable quality and effective performance of clothing are essential. With Heimbach, we have the ideal partner to survive in this dynamic environment. We have full trust in the experience and knowhow of

our main supplier, which makes us optimistic about the future.

**A perfect way to conclude.
Many thanks for the discussion.**

Jeonju Paper corporation:

The mill site was established at Jeonju city in the mid 1960s and known as Seahan Paper Co., Ltd. Located approximately 200 km south of Seoul. This mill was the first TMP mill in South Korea and at their peak they were producing 2 million tons of Newsprint per annum from two mill sites and across eight paper machines. Today they produce 1 million tons Newsprint and packaging grades combined (40% news 60% packaging) from one mill site and four paper machines.

In profile

At Heimbach, many paths converge and employees in Europe and Asia work hand in hand. As representatives of our international team we are happy to introduce four more committed Heimbach colleagues to you today.



Aaron Farrell

Lean expert / Heimbach UK Technical Services

"If the plan isn't working, change the plan, not the goal"

This year marks the tenth anniversary of Aaron Farrell's time at Heimbach UK in Manchester. His first job took him to the weaving department. Here he acquired a deep mechanical understanding of the process and developed a critical eye for quality, at the same time as learning the importance of delivery deadlines. This was also the trigger for him to qualify in Lean Management.

Since 2020, Aaron has been our lean process expert at Heimbach UK. Consistently high customer satisfaction and increased profitability can also be partly credited to him.

By background: Trained Mason, further training as Lean Manager

At Heimbach: Since 2011

Field of activity: Responsible for the continuous development of lean processes at Heimbach UK. Technical support in the weaving department.

Milestones: Continuous improvement of organisational processes and procedures, standardisation of best practise methods.

In private: Aaron is a dedicated family man and spends most of his free time with his children. He is also a keen fisherman and loves nothing more than watching the magnificent koi carp in the back garden of his home.



Marcus Neumann

Product Manager Pressing, Belting, Drying

"Every problem that you master now, you'll be spared in the future"

Although still relatively young, Marcus Neumann knows our industry like the back of his hand. Trained and further educated whilst employed at two different paper manufacturers, he started his career at Heimbach in 2017 within our TASK department. Here he focussed on measurements in the dryer section for three and a half years. As a result his awareness of the challenges faced by our customers comes from daily practice. Marcus recently changed areas of responsibility and is now gaining experience as a Product Manager.

By background: Trained mechatronics and paper technician

At Heimbach: Since October 2017

Field of activity: Trainee Product Manager Pressing, Drying and Belting

Milestones: With his process knowhow, Marcus provides valuable support in Product Development

In private: Marcus is familiar with pressing, not only in his place of work but also as a recreational athlete on the football field or tennis court. He also likes to lace up his hiking boots or get on his mountain bike at the weekend.



Sebastian Johnen

Team Leader Lean Management PMC

"At Heimbach, tradition and modernity come together. I am proud to be a part of it."

For Sebastian Johnen, Heimbach is both his present and his childhood. As a young boy, he rode in the school bus past the company buildings every day. In 2013, he applied for a dual study programme with us. Since that time, he has remained with the company. Amongst other activities, he completed a semester abroad in Shanghai and followed this by spending several weeks at our sites in China, Spain, England and Switzerland. In 2019, Sebastian became co-ordinator within the Lean team, which he has also led since last year.

By background: Industrial clerk / BA Industry Management

At Heimbach: Since 2013

Field of activity: Responsible for the continuous improvement of our paper machine clothing processes

Milestones: Establishment of a group wide document management system for quality, idea creation and lean management

In private: Sebastian loves dynamics, both at work and in his private life. Outdoor pursuits such as football, jogging or mountain biking give him energy for new ideas. He can also find relaxation on a games console.



Robert Di Poce

Technical sales manager Italy

"Make your job not only a job, but a passion"

Robert di Poce is a true thoroughbred salesman: Always with his foot on the gas, no road is too far, and no measurement ever too time consuming for him. He doesn't just want to make papermakers satisfied, he wants to inspire them. The daily phone call with the customer is just as much a ritual for him as his breakfast espresso. Robert is valued not only for his technical expertise, but also his open ear and constant willingness to help. He is fascinated by products such as Primoselect and Atromaxx because they enable him to bring the best solutions for his customers.

By background: Mechanical Engineer

At Heimbach: Since 2000

Field of activity: Sales and technical support in the Italian market

Milestones: Key figure for Italian corporations; one of his latest projects is the rebuilding of the gigantic PM9 at Burgo Verzuolo

In private: Robert is very familiar with fast-running paper machines. He also loves speed in his private life. His great passions are fast cars and Formula 1 motor racing and for him, nothing beats "La famiglia".



References that convince

Atromaxx successes in packaging papers

Machine: Testliner, Fluting 80-200 gsm, 1500 m/min

The Atromaxx Duo (Pick-up and 1. Press bottom felt) achieved a dry content of 57,3% after 12 hours running in what was a fantastic start up. The Atromaxx combination continued this strong performance on various grammages through the run.

Machine: Kraft and Sack papers, Basis weight 70-90 gsm, 1200 m/min
With Atromaxx.Connect running in all press positions, and a Yamabelt in the transfer belt position, a new monthly production record was achieved. In the process, the machine achieved a sensational efficiency of almost 96%.

Consistent benefits when running Primoselect

Machine: Newsprint, 45 gsm, 1800 m/min

The increased life potential offered by Primoselect reduced the consumption of forming fabrics by 5 units per year. At the same time improved former cleanliness ensured fewer breaks and fewer cleaning cycles. Primoselect paid for itself through lower costs and increased production.

Machine: White Top Liner, 115-125 gsm, 700 m/min

Total energy savings of 10% (at drive roll) confirmed with Primoselect.HD+ after removal from the bottom position.

Machine: Testliner, 80-130 gsm, 1500 m/min

A fine-tuned set of Primoselect.HD provided a 20% reduction in drive load.

The customer also confirmed improved retention and optimised sheet formation.

Machine: Packaging papers, 75-140 gsm, 1500 m/min

Primoselect was credited with an overall good start-up, improved former hygiene and a dry content of 24% out of the forming section.

Anything but an environmental dinosaur

We have been reporting on sustainability issues for some time now, and we will continue to do so in this edition too, as there is more news to share. Compliance and sustainability do not just exist on paper to us. It is a process that we take very seriously and are constantly developing as an active member of the UN Global Compact. This March, for example, we were awarded the "Assured Sustainability" seal of approval by DINO for the first time.



"Heimbach actively puts sustainability into practise in an exemplary manner throughout the company."

Of course, we read this sentence with particular pleasure. It is, after all, the very essence of the audit carried out in Düren by the German Institute for Sustainability and Economy, DINO for short. This institution is the central awarding agency for the

internationally recognised "Assured Sustainability" seal of approval. More than 16,000 companies from over 200 industries in Europe, Asia, North and South America and South Africa have now been certified.

Meeting ecological and social responsibilities is a task for generations. And, just as it is with our clothing, our standards are very high. That is why Heimbach not only opened its doors to the DINO auditors, but also had itself evaluated a second time by Ecovadis.

Challenge accepted

At the last audit in 2019, we were awarded bronze. A good success, but we did not want to rest on our laurels. So we have improved further in the fields of environment, labour and human rights and sustainable procurement and are confident that Ecovadis will "reward" our commitment accordingly. As the results were not available to us at the

time of going to press, we will report in detail on this subject in the next edition of Impressive.

For those wishing to know the fine details – Heimbach's CSR Report

Are you interested in finding out exactly what we do for people and the environment? Then please take a look at our Sustainability Report 2020, in which we disclose our compliance and sustainability strategy, including the associated guidelines, philosophy, goals and measures implemented to date.

You will find the complete report for browsing and downloading on the news section of our website.

We appreciate your interest.





Heimbach-TASK

Process expertise and tailored solutions

Even small improvements in and around the paper machine can often release great savings potential. Your profitability 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

