concrete 22 | compact

WASA COMPANY MAGAZINE

TOPIC: FUTURE | Three generations in conversation

PETER WEBEL | 9,125 days of invaluable expertise

WASA STACKING | For the WETCAST technology of tomorrow

Competence Leadership.

DEAR READERS,

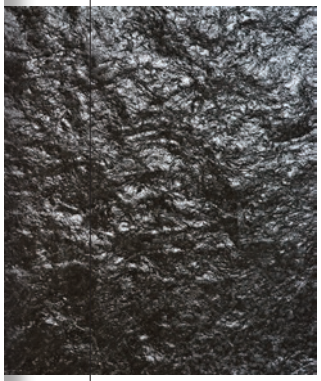
When the COVID-19 pandemic was at its peak, many of us thought it was the biggest crisis to hit for decades. Until February 24, 2022, that is. Because this marks the date when Russian troops invaded Ukraine. War had come to Europe, a prospect thought impossible just a month earlier.

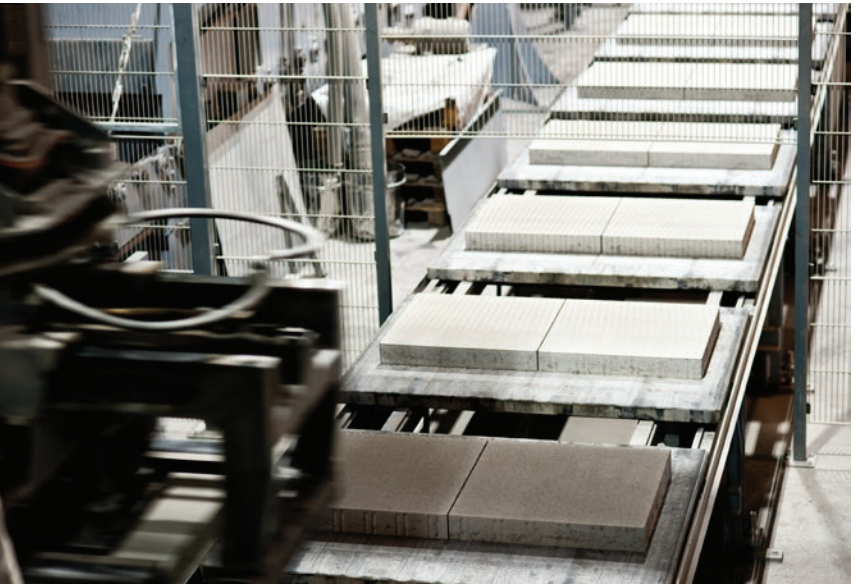
For us and thousands of other companies, these global events have created unprecedented challenges. Not only the collapse of entire markets such as Russia, Ukraine, and Iran as a result of wars and sanctions, but also the sharp increase in energy costs and crippling supply chains are a real hurdle for any company.

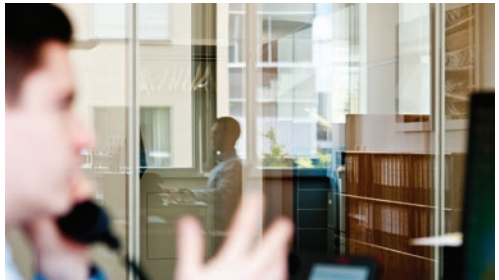
But even with that in mind, we and the whole industry are looking forward to attending the leading global trade fair bauma 2022, which opens its doors in October after a long wait. And the highlight of this year's edition – the supply of WASA PRECAST molds for the facade of the new Mark München project – is sure to make for some interesting discussions at our newly designed exhibition stand.

I hope you enjoy reading this latest edition of concrete[22], hot off the press!

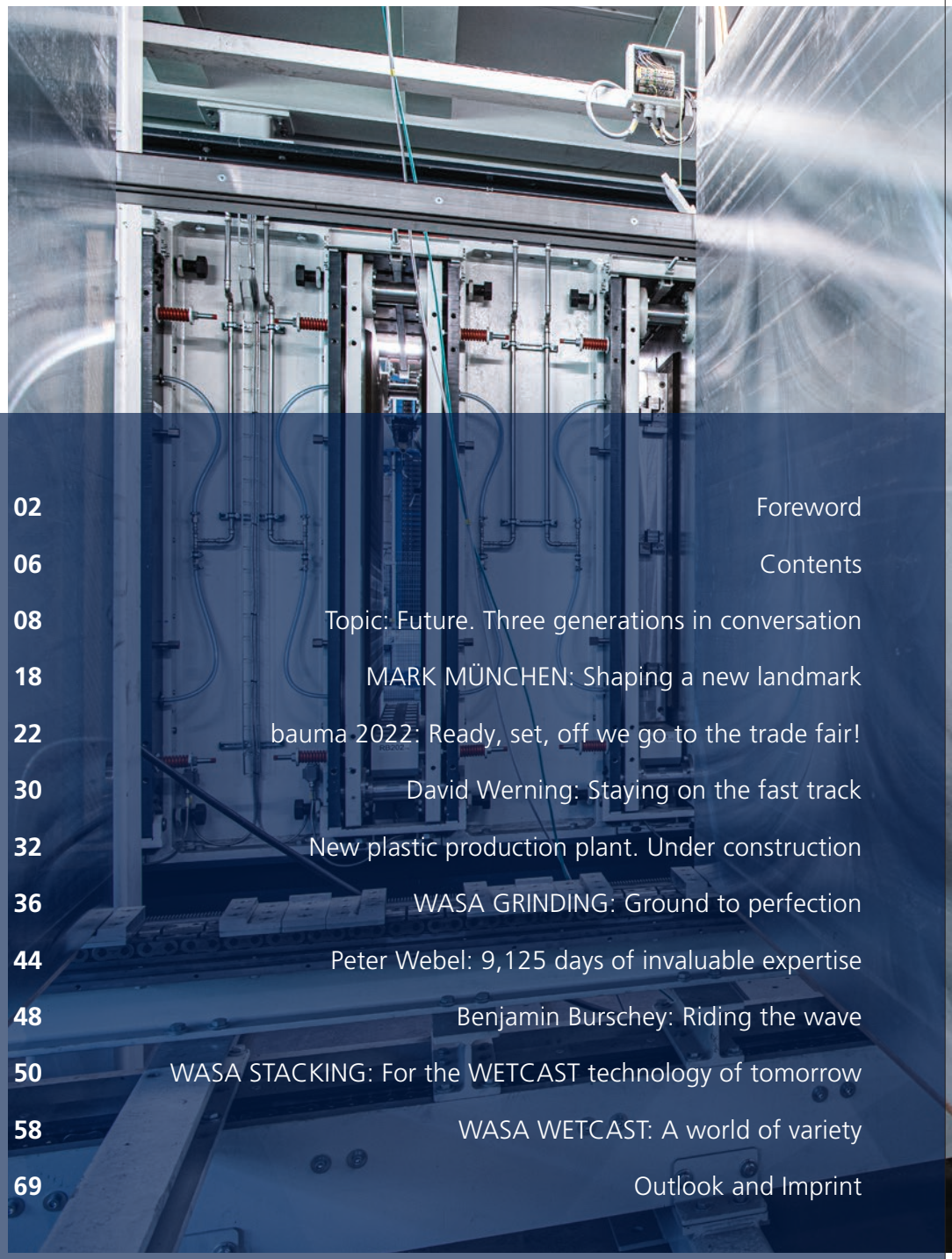
Yours, Matthias Bechtold
Chairman and CEO of WASA AG








WASA



THREE GENERATIONS IN CONVERSATION

Topic: Future.

WASA in 10 years: What is new? What has changed? What is your vision for WASA's development in the coming 10 years?

Matthias Bechtold (M. B.): We have a clear vision for the year 2032: WASA operates a production facility for wet and precast molds in the USA. A small affiliated sales office covering the USA and Canada, as well as Central, Latin and South America. By that time, we also plan to have strongly grown and expanded our product portfolio for facade elements.

Dr. Arno Schimpf (A. S.): I share this view. I also believe that WASA will remain the largest manufacturer of production boards on the market in the coming ten years, if nothing else in terms of quantities sold.

Jannik Webel (J. W.): WASA will invest strongly in renewable energies and in further increases in the level of automation in the coming years. The reality of Industry 4.0 is no longer a topic for the future, but is happening today.

Where do the biggest opportunities and risks for WASA lie?

M. B.: The biggest opportunities lie in the experience that WASA has gained in recent decades, including the fact that we have also learned how to deal with setbacks, which is almost more important than celebrating successes. Our biggest advantage are the short decision-making paths among the partners and in management. This was already implemented brilliantly in the group by the previous generation under the leadership of my father, Heinz Bechtold. This enables decisions to be taken quickly when necessary. We react fast to customer requests and problems, and take complaints in sales particularly seriously.

As far as the risks are concerned, we see constant volatility in markets and economic areas. All you have to do is pick up a newspaper. There's always a "crisis" somewhere. Default risks will increase in future, and crises – whether pandemic-related, political and economic – will happen more frequently.

A. S.: We see a big opportunity in what you could call an "all-in-one carefree package" for our customers. WASA is the only provider that can offer its customers complete solutions in wetcasting, precasting and board machines.

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Such a broad product portfolio is unique on the market. The benefit for the customer is that WASA has a specialist available for every application, whatever their issue may be. They can get everything they need from a single source.

Our outstanding production depth also offers excellent opportunities. The best example of this is our production of wet and precast molds. WASA performs every step of production here, from the CAD drawing and model building to pouring the finished mold. We have our own carpenters, metalworkers, technical draftsmen, designers and polyurethane specialists. None of this comes cheap, but it gives us full control over the quality of our products.

J. W.: A certain risk is posed by a handful of discount suppliers from China, as is becoming increasingly apparent in a globalized world. By offering products that appear to deliver the same quality, they create a big stir on the market – at least initially. But time plays an important role here. Our industry looks for long-lasting reliability and quality. The Made in Germany label and our own longstanding reputation are rightly valued by our customers around the world more than ever.

Change at WASA: What change processes are currently being planned and for what purposes?

J. W.: In future, we want to continue to encourage the use and processing of secondary raw materials, and rely more on renewable energy. Even today, we are able to cover a large proportion of our electricity needs with our own cogeneration unit. But there is still room for improvement here. Given this summer's developments in electricity prices, we are happy to be at least a bit more independent.

M. B.: Digitalization is a predominant topic in our industry as well. WASA got on-board here very early on and has continuously streamlined its processes and digitalized them. This year, we implemented an entirely new ERP system that has further optimized or accelerated countless processes throughout the company. Customers also benefit when staff spend less time on workflows and more time on visiting and talking to them.

A. S.: We see how the WASA BOARDS and WASA CONSTRUCT business areas are becoming ever more closely interwoven in terms of the sales organization, which previously was only active for WASA BOARDS in Darmstadt. This means that the sales staff of both brands will therefore be merged over the medium term. This will generate synergy effects and makes customer management much easier, as the customer will have just one sales partner for all products. Production of the entire WASA product portfolio will remain in Neubrunn.

What change processes are you witnessing in terms of the industry and competition?

M. B.: Family-run businesses are increasingly being acquired by larger corporate groups. This is causing the loss of networks and close relationships. At the same time, short-term investment decisions are becoming increasingly important. Managers tend to think in cycles of 12 months, as their bonuses are measured only by the annual results. In contrast, managers of family-run businesses think and plan for the long-term. This makes selling boards more difficult, as they only amortize after a longer period. One of the things that makes our WASA UNIPLAST ULTRA so special is that although it is the most expensive board in our product range, it is still by far our most important product with over 80 percent of overall revenue.

A. S.: In the molds sector, we see a continued trend towards higher-quality stone products. This applies to both how they look and feel, as well as to the increasingly tough demands on equipment and production processes. But this heightened awareness of quality among our customers plays into our hands, as not every competitor on the market can deliver the desired quality.

What exactly do you think makes WASA so innovative?

M. B.: It may sound cynical, but in hindsight we can be thankful for all the complaints that we have received throughout the 60 years of our company's history. Every time, they served as inspiration and impetus for innovation. Take the first designs of our solid plastic board, for example. Back then, it was a tried-and-tested product with inner steel profiles that occasionally experienced problems due to corrosion. Without these complaints, we would have never come up with the idea in 2007 to consider a board without any steel at all. That ultimately marked the birth of WASA UNIPLAST® ULTRA boards, of which we now sell over 140,000 every year and which remains the industry benchmark to this day.

J. W.: I think more evidence of our innovativeness can be found in the fact that we recognize the signs from the market early on. We embrace changes and react with new or modified products.

A. S.: I think much of the innovation strength at WASA comes from the close collaboration and exchanges between sales, production and the development department. Many years ago, we were the first to offer regrinding of production boards, as our sales staff told us that there was a demand for this service on the market. We then got to work in the R&D department and developed a special solution for grinding our solid plastic boards. Although some of our competitors have since copied us and jumped on board, the idea was born at WASA.

What is WASA's greatest asset?

A. S.: It may sound a bit trite because you hear this all the time, but for WASA it is true: our greatest asset is our experienced workforce at both sites and the valuable expertise that has grown here. In niche markets like ours, you need people who know the inner workings of this very special industry. Our colleagues have this knowledge.

M. B.: Dr. Schimpf is absolutely correct. I would perhaps add that we not only have an excellent workforce, our management structure is also top notch. This allows quick reaction times, short decision-making paths and a very strong focus on our customers.

J. W.: There is also our perseverance and determination that we apply to everything we do. We simply never give up, no matter how difficult the situation. This perseverance does not come easily, but once you reach your goal you are proud of the path you have traveled.

What are the innovations in the concrete and construction industry that currently excite you?

A. S.: I'm impressed by ultra-high strength concrete in commercial and residential con-

struction, as well as the associated architecture. I also like the increasing focus on 3D concrete printing.

J. W.: One of the things that impresses me a lot is building information modeling, or BIM for short, which is essentially digitalized construction. BIM has definitely revolutionized construction.

Why do customers choose WASA?

M. B.: One of the main reasons why people choose any manufacturer, regardless of the products they sell, is always the product itself. And here at WASA, we offer the most suitable products for their needs. These products have developed along with our reputation for over 60 years, and are certainly one of the reasons that customers choose us and not the competition.

J. W.: When you look at WASA UNIPLAST® ULTRA, I am sure that the product as such is enough to sway the decision in our favor. As Dr. Schimpf mentioned earlier, the board offers unrivaled benefits thanks to its benefits offered by regrinding.

Do you have a favorite place on the WASA premises?

A. S.: I always feel most comfortable when I'm walking around our production halls and speaking to the people who work on the machines there. There is no better place to get a quick and clear overview of what's going on or where there are problems.

J. W.: Absolutely, it's the same for me. I've only been on board for two and a half years, so it is important for me to establish and develop my relationship with the staff. I'm in the production halls five to six times every day, either on my own, with my father or with our operations manager, Mr. Huneshagen.

M. B.: As I work in Darmstadt, I only have contact with the office staff and not anyone in production. The place I love to be more than anywhere else there is the largest of our conference rooms, with its huge monitors, video systems and the wonderful oak meeting table. During the pandemic, it was my gateway to the world for countless hours, as we were unable to travel. Now that travel is allowed again, my favorite place to be is in a plane flying to our customers. We went too long without being able to visit them during the pandemic.

What changes do you expect to see in the concrete and construction industry in the future?

M. B.: I expect the trend toward high-quality production boards to gain further momentum in future, as manufacturers move away from softwood boards, for example. These may be cheaper to purchase, but are not really economical over the long term. The demands that concrete block producers place on production boards will continue to grow. There will be considerably greater emphasis on low deflection, smooth and low-wear surfaces, as well as durability of the production boards.

A. S.: Wet and precast applications will continue to grow. We are already reacting to this through larger investments and by expand-

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ing WASA CONSTRUCT. The importance of the Chinese, Indian and African markets increase. At the same time, we will see new competitors emerging from China and India. This fact cannot be ignored.

J. W.: I think we will increasingly see corporate structures moving into the concrete sector. Owner-managed private companies will increasingly be pushed to the sidelines, which is certain to have some negative consequences in terms of the heart and soul of the entrepreneurs. The issues of sustainability and environmental protection will certainly become more and more important. ■

01 | 02 | 03 | 04 | 05 | Three generations in conversation: Jannik Webel, Matthias Bechtold, and Dr. Arno Schimpf (from left to right)

Age:
26

Graduated in industrial engineering (majoring in electrical engineering) at the Ilmenau University of Technology

Position:
Member of the Management Board of WASA Compound GmbH & Co. KG at the production site in Neubrunn

JANNIK WEBEL

Age:
45

Studied law and business administration at the University of Bayreuth and the University of Münster

Position:
Chairman of the Management Board of WASA AG at the Darmstadt site

MATTHIAS BECHTOLD

DR. ARNO SCHIMPF

Age:
58

Studied mechanical engineering at the University of Kassel,
PhD from the Brandenburg University of Technology Cottbus–Senftenberg, Faculty of Process Engineering and Environmental Law

Years of experience as a managing director in processing secondary materials and in plant engineering

Position:
Managing Director of WASA Compound GmbH & Co. KG at the production site in Neubrunn

MARK MÜNCHEN

Shaping a new landmark

Every city in the world is defined by architecture. And good architecture is, in turn, always at least partly defined by the city in which it appears. The west end of Munich is currently seeing the construction of a large series of buildings that will become a new landmark in this part of the city. Standing out among the monotony of the existing buildings around it, it delivers a modern and dynamic statement that enriches the entire surroundings. It even bears the name of the city in its own name – MARK MÜNCHEN.

"To produce the required facade elements, WASA provided a total of 18 mold sets in five different designs."

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01 | 02 | The light concrete facade makes MARK MÜNCHEN appear multifaceted and varied from all perspectives

After numerous successful joint projects, the Lindner Group once again turned to WASA Compound GmbH & Co. KG to create the facade molds for the project. WASA is therefore shaping another major, high-visibility project with its expertise.

To produce the required facade elements, WASA provided a total of 18 mold sets in five different designs to allow the production of the concrete blocks. The mold set for MARK MÜNCHEN consists of a large number of components that ensure enormous stability once they are assembled.

To begin with, the PU matrix is glued to the side shells. The liner features a recess to facilitate connection to the base plate. The construction consists of the side supports (left and right) that are made from PU-coated multiplex boards. A ribbed frame is mounted on these supports, allowing for a 90° assembly on the base plate. By attaching the longitudinal supports, the length of the elements can be precisely adjusted.

MARK MÜNCHEN has an above-ground gross floorspace of 51,000 m². The process of mounting the sophistically designed facade which encases the building began in early 2022. The delivered polyurethane casting molds each weigh 150 kg and measure 3.0 x 1.50 meters.

The building is due to be completed in the fall of 2022. Around 2,000 people will spend time inside the building every day. Flexible interior designs add to the building's dynamic external effect, while ensuring that every moment spent inside is enjoyed. ■

BAUMA 2022 – CREATING AN EXHIBITION STAND

Ready, set, off we go to the trade fair!

01

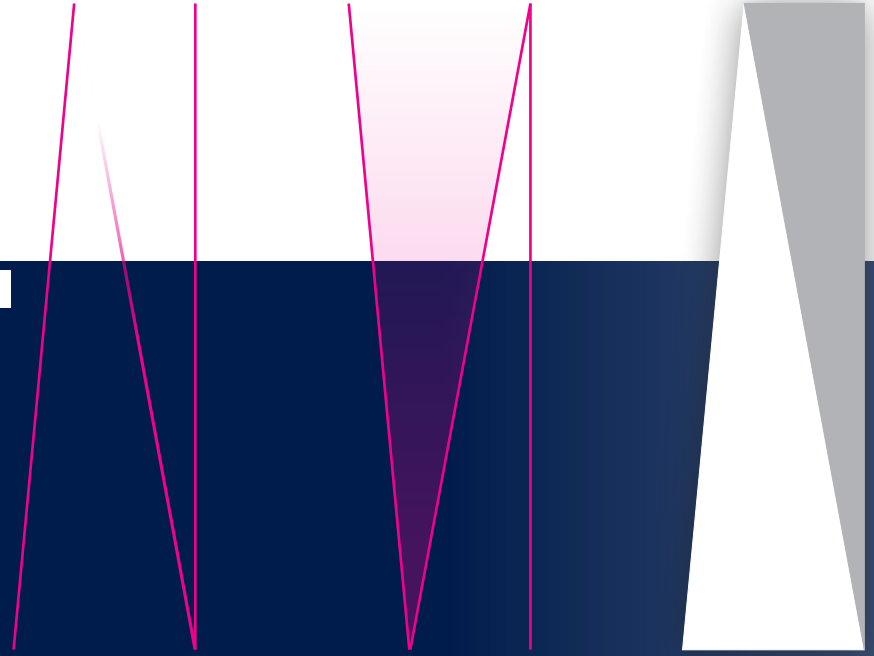
The whole construction and concrete sector is looking to the 33rd edition of bauma in Munich from October 24, which will be opening its doors half a year later than usual due to the coronavirus pandemic.

bauma is a major event in the concrete and construction industry, a beacon of innovation and an opportunity to show off the latest achievements and developments, which are becoming more and more sophisticated and complex from one edition to the next. After all, this is an industry that never sleeps! Driven by new technical innovations, the possibilities are changing, and so too are customer and market requirements.

WASA AG will be right there at the heart of the trade fair, with a booth of 100 square meters that can be seen from all around. It's impossible to imagine bauma without WASA. That's how indispensable our skills and capabilities as the global market and innovation leader have become in the international construction industry.

WASA is a dynamic company with one goal in mind: bringing tradition and the future together in the here and now in order to develop products that lead the way in the concrete and construction industry. WASA's expertise is based on its drive to always be one step ahead and thereby continuously improve its proven capabilities.

A good exhibition stand should reflect this self-image and communicate it unequivocally. The decisive factors in planning our



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"The exhibition stand tells the story behind our products, from rough sketches to the final product."

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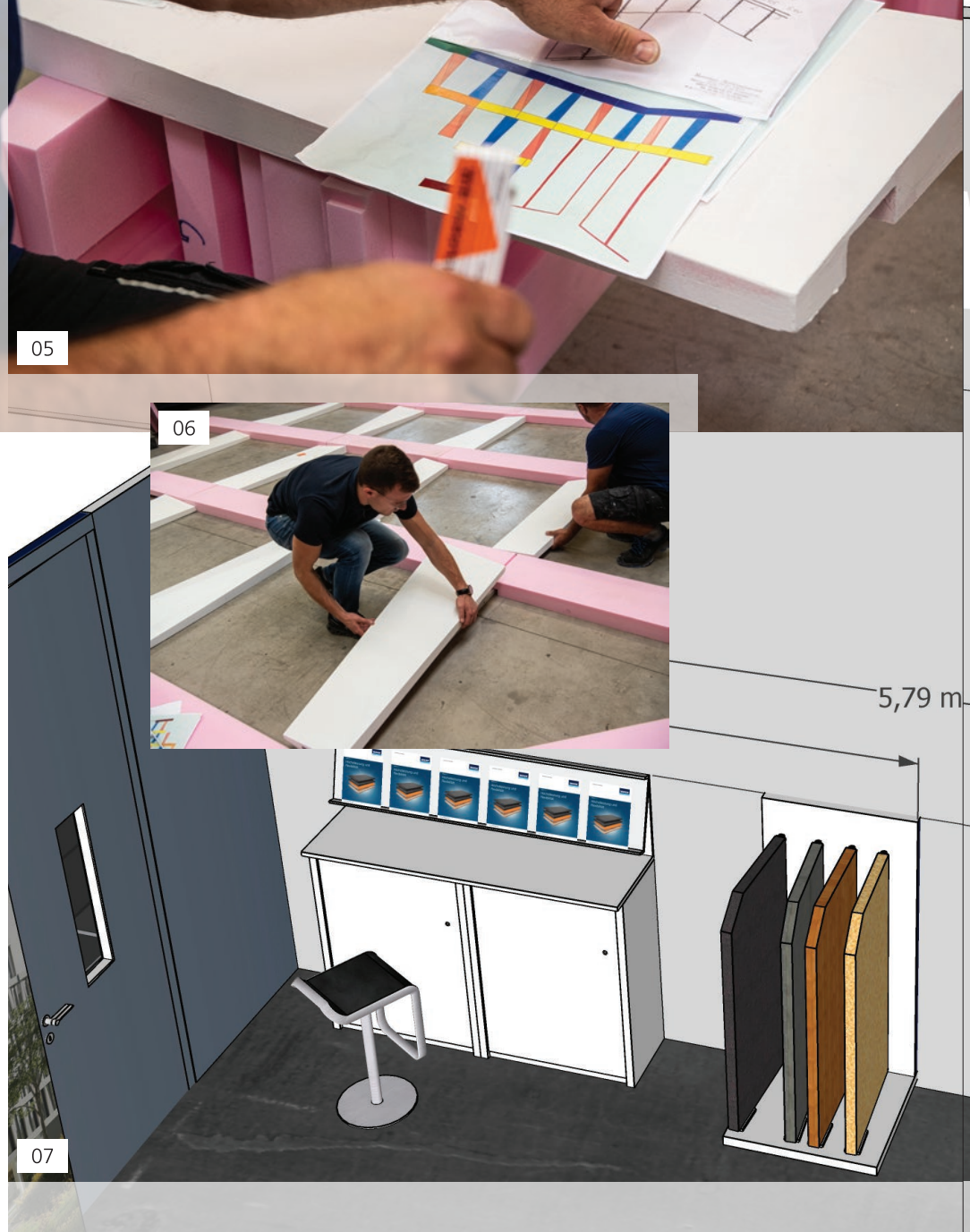

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trade fair appearance are the people behind it, who help convey WASA's core characteristics through a powerful trade fair concept and stand design. This team includes Matthias Bechtold (CEO of WASA AG), Dr. Arno Schimpf (Managing Director of WASA Compound GmbH & Co. KG), Susanne Anding (Executive Board Assistant), the NIC HAY design studio from Frankfurt, and an exhibition stand manufacturer from Darmstadt.

Work on the stand concept began in spring 2021, one year before bauma – when it was still due to take place in April 2022. The concept, design, and photography were created by Nico Wallfarth (NIC HAY), who has been responsible for the entire visuals of WASA's appearance for years.

The exhibition stand tells the story behind our products. From rough sketches to the final product, visitors can gain insights into the WASA portfolio and how our products are used.

The most eye-catching feature of the stand is the exterior of the major MARK MÜNCHEN project, which is currently under construction. The origin of the concrete facade of this building ensemble can be traced back to WASA PRECAST molds. A 1:2.5-scale mockup of the facade seems to emerge from a dynamically assembling structure of sketched lines. A huge simulation then reveals the building's final appearance. This sequence is a figurative way of tracing the development stages of a product as it is created: starting with the idea, its further development in the form of sketches, drafts, and models, and its final design in the completed project.

An installation located in the aisle simulates how products from the WASA WETCAST portfolio are created, so visitors can track the

various production stages from beginning to end: starting with the model, then the corresponding production mold, and finally a depiction of the final stone product. Eight different surface finishes are shown from a vast range. It is amazing to see the immense diversity of the individual structures alongside one another.

A simulated curing chamber forms the centerpiece of the WASA BOARDS section. The installation, which is exclusively equipped with WASA UNIPLAST® ULTRA, demonstrates the enormous flexural rigidity of WASA BOARDS, on which various concrete products of different weights are placed.

The stand serves as a visual guide to the WASA product portfolio, impressively and sometimes playfully illustrating the enormous breadth of WASA expertise and the benefits for customers all over the world. ■

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Facts and figures

- 190 square meters of exhibition space
- 32 facade elements made of Styrodur, machined individually
- 400 LED modules with a total power of 12,000 watts
- 300 m of power cables
- Total stand weight: 15 tons

01 | Lighting and color tests on the stand walls

02 | Development stages of trade fair graphics

03 | 04 | The individual parts of the facade mock-up are milled, ground, and treated with a filler at WASA's facilities

05 | 06 | WASA employees check the facade model for accuracy

07 | A simulation of the curing chamber design

08 | Simulation of the finished stand at bauma 2022

DAVID WERNING

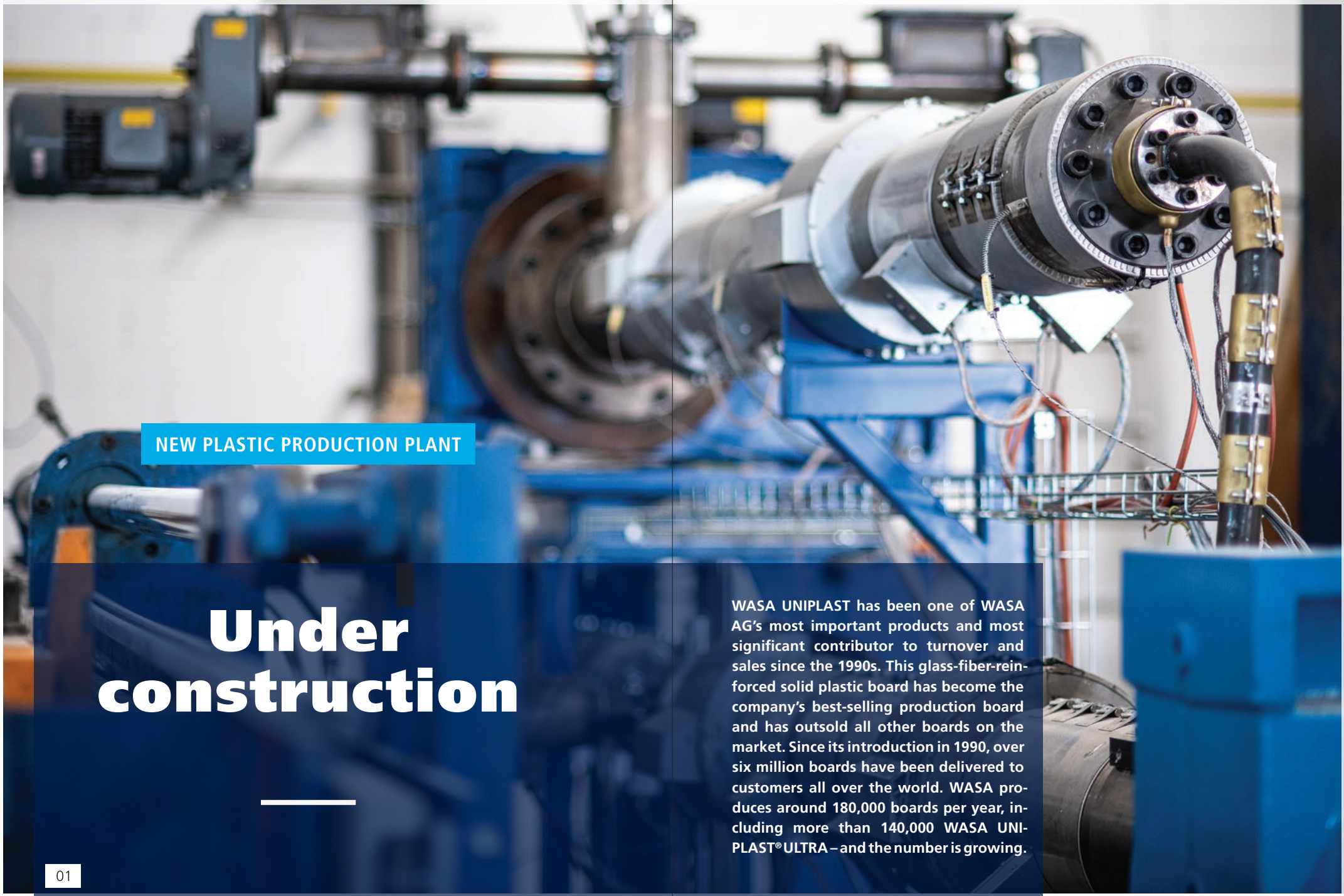
Staying on the fast track

David Werning could almost be described as a veteran at WASA. He began his industrial business management apprenticeship in 2001 and completed it successfully in 2004. Ever since, he has been contributing his expertise in raw wood purchasing, wooden board production and production planning at WASA. After undergoing advanced technical business management training focusing on the wood industry and further activities in related businesses, he returned to WASA in 2012 as a member of sales staff. In May 2020, he was given full management responsibility for this area of the business.

David Werning is an indispensable member of the team in Neubrunn. From customer acquisition and determining raw material needs to project development and much more, the company relies on him to perform important tasks that make a decisive contribution to the success of increasingly demanding projects. He loves nothing more than playing a leading role in flagship projects and shaping them with his skills.

This desire to constantly do his best in all areas is a personal trait not just limited to his work – this drive is something that defines him and his personal demands regarding achievements in all areas of life. As a result, it is not just WASA, as a company, which benefits from this, but everyone around him. Most important to him is his family. David Werning is a passionate DIY enthusiast and racing cyclist. He sits firmly in the saddle in all respects.

His wife and two daughters never cease to cheer him on to his next top achievement, whether on his bike or elsewhere. ■



NEW PLASTIC PRODUCTION PLANT

Under construction

WASA UNIPLAST has been one of WASA AG's most important products and most significant contributor to turnover and sales since the 1990s. This glass-fiber-reinforced solid plastic board has become the company's best-selling production board and has outsold all other boards on the market. Since its introduction in 1990, over six million boards have been delivered to customers all over the world. WASA produces around 180,000 boards per year, including more than 140,000 WASA UNIPLAST® ULTRA – and the number is growing.

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In response to the ever-increasing demand, WASA decided to build another plant for plastic board production. This will take the number of plants for producing the WASA UNIPLAST® ULTRA to four.

Planning and construction of the plant began in 2020. It was not possible to commission the system at the start of 2022 as planned due to a combination of the pandemic and delivery problems for steel parts and electronic controllers. By autumn 2022, however, all four plants will be up and running 24/7.

"The final phase of steel construction work is nearly completed and the controllers are being programmed. In just a few weeks' time, the first trial boards will be manufactured on the new production line," says Matthias Bechtold, Chairman & CEO of WASA AG.

This huge investment will also secure WASA's position as the market leader for production boards, proving once again that success does not come from standing still, but instead from the will to pursue continuous and sustainable growth.

"The fourth plastic plant consists of 14 molds that are filled with the plastic-fiber mixture using an injection molding process."

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01 | Extrusion plant | **02** | Cooling and heating system | **03** | Roller conveyor for molds

In the next issue of concrete[23], you can look forward to reading a comprehensive and detailed report about the precise plant technology. ■

WASA GRINDING

Ground to perfection

It's a question that countless production board users ask themselves every year: when is the best time to replace my boards? The answer is simple: just then, when they can no longer satisfy the high demands placed on them. But the solution does not always have to be new boards. Sometimes long delivery times, budget constraints or global circumstances, such as vastly increased freight prices, can make you think about alternatives. This is exactly where WASA comes in with its regrinding service.

01 The boards are moved from production directly to the grinding system

02 | The sophisticated technology in our grinding container delivers perfect results **| 03 |** The first grinding run

Before the actual step of regrinding, it is important to carefully coordinate the process with the customer's expectations. After all, board specs obviously change when they are ground. This primarily concerns their thickness, but attention must also be paid to any chamfered edges or profiles that may exist. WASA's service also includes a technical inspection and precise consultation with the customer, so that the board can continue to be used as before after processing.

This is also why WASA always requests a few boards as samples in the run-up to the quotation stage. Engineers inspect the boards, assessing their surfaces in particular, and can then for example calculate how deflection will change after a few millimeters have been removed. On top of this, the samples can be used to determine whether 1 mm or 2 mm should be removed from each side. It is always advisable for the customer to send production boards that have been subjected to the most stress in a production facility in order to check the "worst case."

This approach allows us to work with the customer in defining exactly what the desired result should look like in the end and whether this can actually be achieved. Details of processing arrangements as well as the time and duration of the job will be discussed once the samples have been trialground, returned to the customer and approved. WASA has been on the market with the WASA UNIPLAST® and WASA UNIPLAST® ULTRA for some thirty years now – boards that fulfill very stringent requirements and can have a long service life. Regrinding is also a viable option for these boards in order to exploit their existing properties even further and longer. This can provide a second life to a board. A worn surface can be restored to an almost new condition after many years of use in a concrete production facility. Frequently, however, a concrete buildup that has developed over the service life is also a reason for WASA customers to have their production boards reconditioned.

Acheson and Glover in Fivemilltown, Northern Ireland, decided to have their WASA UNIPLAST® boards reground that had been in use since 2003. The mobile truck unit was deployed and was on site for only six days to regrind the 4,200 boards. After 18 years of hard use, the boards are now fully serviceable without restriction for many more years. Persimmon, located in Doncaster, also

took advantage of this service to remove a build-up on their existing WASA UNIPLAST® ULTRA. These boards, which had been in use since 2016, were freed from an acrylic layer that had built up due to spraying hydrophobic agents for protecting the bricks. Persimmon was handed back 4,000 almost as good as new boards after just one week.

The regrinding service began several years ago at WASA's site in Neubrunn (Thuringia) in central Germany. Production boards needing processing were delivered to Neubrunn and reworked. WASA still offers grinding at this production facility. The next batch of boards is delivered for reworking once the first full shipments have been ground. Production boards that have already been ground are shipped back to the customer in a rotational process. This makes it possible to take advantage of this service even in times of high capacity utilization in a concrete block factory, as only a small part of the total quantity is missing at any one time. This applies primarily to customers who are located close to WASA's production facility, as goods can be transported quickly and economically over land.

A mobile version of this grinding system was also developed in order to serve customers who are located further away or even overseas. The system is permanently installed in two 40-foot containers and can therefore be used completely flexibly and independently of the Neubrunn site. The containers are delivered to the customer's premises, where the regrinding also takes place. It is, of course, part of WASA's service to organize and manage the transport arrangements and the en-

tire process. This means that, in consultation with WASA, a customer only has to take care of conditions on site. A forklift truck and driver are needed, for example, to transport the boards to and from the machine; both must be provided by the customer.

All challenges have been mastered so far thanks to WASA's many years of solid experience as well as excellent partners in the logistics sector. The reworking itself is supervised and carried out by specialist staff from WASA directly on site throughout the entire processing period. This means that the work can be carried out during ongoing production processes. Generally, production boards are taken directly from the plant, inspected by WASA's personnel and then ground. The board can be used again immediately after the grinding process has finished.

As soon as the total number of boards has been reground, the unit is dismantled again by WASA employees and removed. In this way, the customer is not required to arrange the handling or logistics.

Commonly, a period of around 7 to 14 days is required for a quantity of around 5,000 boards. The exact duration varies with the condition of the production boards and, of course, with the question of whether the boards need to be ground once or twice per side. This, in turn, depends on how great the concrete build-up is or how deep the depressions are.

WASA has been offering another mobile option for regrinding at a customer's premises since 2014 in conjunction with its coop

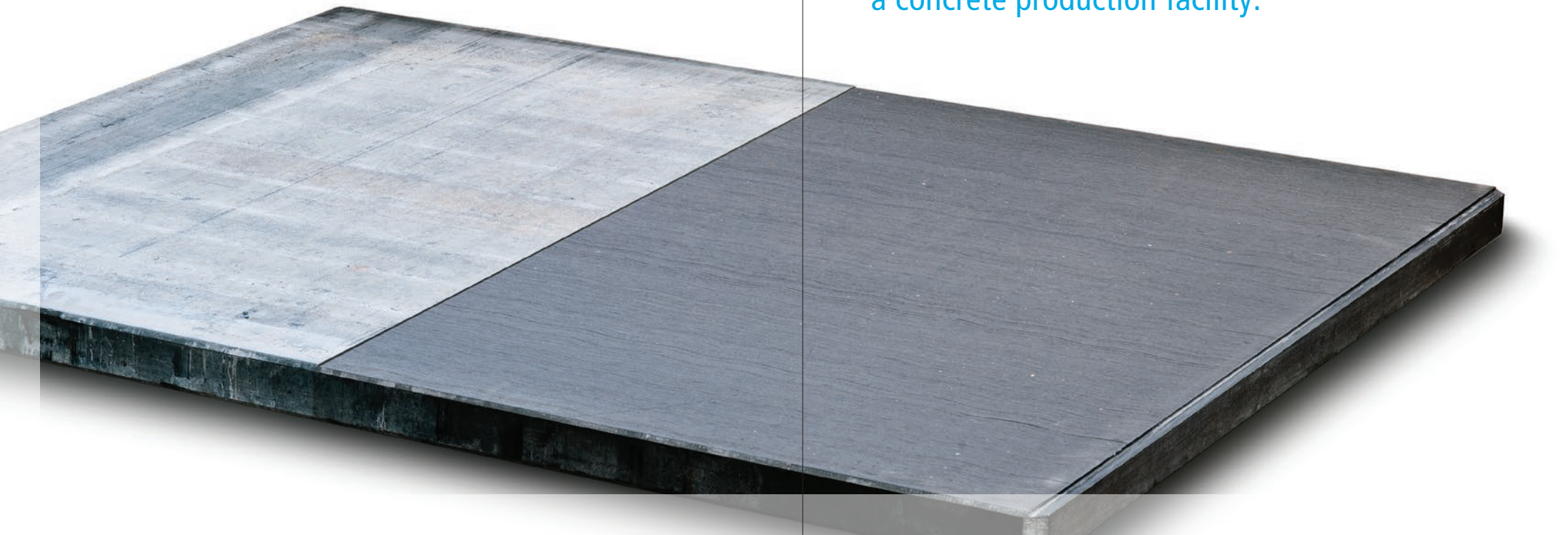
eration partner DeeBeeCee (Dutch Board Calibration). In this case, however, no sea containers are involved. Instead, the grinding system and required accessories are installed and stored in two trucks. With this solution, skilled WASA employees also drive the trucks, so that the logistical burden is reduced to a customer-friendly minimum. It is also possible to react very flexibly with the trucks and thus cover needs that arise at short notice. Complete service and organization are managed and carried out by DeeBeeCee and WASA with this variant as well. As with the containers, all that is required on site is the necessary space and a few preparations such as providing compressed air or disposing of the grinding dust.

Since the introduction of WASA GRINDING – the official name of the service – more than 350,000 boards have been reground. Especially in this day and age, the service offers a very quick and convenient solution for prolonging the life of existing production boards.

Regrinding is a very economical solution in times of ever tighter budgets, because it necessitates only a fraction of the investment for new production boards.

Even if regrinding is mainly performed on solid plastic boards, this option is also available for softwood and hardwood boards. The extent to which grinding wooden boards might be economical is always considered on a case-by-case basis. The same applies to grinding coated production boards; although generally possible, it is usually not economical or sensible. This is because the ground wood cores have to be coated again after grinding, thus resulting in high costs. Steel production pallets do not allow grinding, so if their surfaces are damaged, the sheet metal must remain in its status quo or has to be replaced. ■

"WASA GRINDING can provide a second life to a board. A worn surface can be restored to an almost new condition after many years of use in a concrete production facility."



PETER WEBEL

9,125 days of invaluable expertise

When Heinz Bechtold invented the WASA UNIPLAST® all-plastic board in 1989 and opened a production facility in Neubrunn, Thuringia, in the same year, little did he know that he would meet a young man from Peine in Lower Saxony, who eight years later would become his closest sparring partner and a great mind for helping to further develop this revolutionary production board. This young man was Peter Webel.

On December 31, 2022, Peter Webel will wrap up his professional career at the age of 57 and will pass on the baton to his two sons, Jannik (26) and Eike (23). To celebrate his well-earned retirement, we take a look back at the last 25 years, in which Peter Webel had a profound influence on the company as it has navigated through high and lows.

Heinz Bechtold and Peter Webel met initially in the early 1990s. In 1997, their paths crossed again at a general meeting of the German plastics and recycling association (Fachverband Kunststoff und Recycling, FKuR), of which the then 32-year-old Webel was a member. A trained plastics engineer, Webel worked for the Jacob Becker GmbH & Co. KG recycling firm from 1990 to 1997, overseeing the plastics processing companies within the group. Back in the 1990s – just as we see history repeating itself today – the biggest challenge facing the plastics processing industry, of which WASA was now part since developing its all-plastic board, was securing the supply of raw materials. There were just not enough plastics available. At the time, the main supplier was Duales System Deutschland (DSD), which became famous for its yellow bag for recycling plastics.

"I've valued Peter Webel from day one for his extraordinary expertise, as well as his forward-looking and analytical way of thinking," says Heinz Bechtold. "So, I very much welcomed the fact that Peter joined the board of the FKuR to strengthen our association with his top-class expertise," Bechtold continues.

At the time, though, WASA was not only looking for raw materials, but it also needed a specialist in plastics processing at its site in Neubrunn. After several meetings between the two, Bechtold offered Webel a managing director position at the Thuringia site. Combined with the prospect of being made a partner later on, this was an attractive offer that Peter Webel simply couldn't refuse.

01 | Peter Webel and Heinz Bechtold in discussion **| 02 |** Peter Webel during the first regrinding tests of the boards **| 03 |** Inspecting the newly acquired property **| 04 |** Three generations together: Matthias Bechtold, Peter Webel and Heinz Bechtold in 2006

Webel joined WASA in November 1997, becoming Managing Director of Production at the Thuringia site. With his wife Silvia and first-born son Jannik, the family moved from Peine to Meiningen in Thuringia, where they enjoy living to this day and have come to appreciate and love Thuringia as their new home. Just one year later, Heinz Bechtold delivered on his promise and sold Peter Webel shares in the company. "The early years were far from easy," says Webel. "The all-plastic board was already on the market for six years when I started at WASA. But there have always been setbacks in terms of the raw materials supply and the quality of plastics," recalls the passionate cyclist and table tennis player.

WASA's biggest challenge was to build plants and systems that were capable of producing the all-plastic boards. Because it was a patented product that was new to the market, the corresponding plant technology just wasn't available. "We developed and built all the systems we needed on site to make production boards ourselves," says Webel. Fortunately, management has been able to rely on a dedicated and motivated team over all those decades. "Without our staff – both in production and the office – the success story of WASA UNIPLAST® would not have been possible," Webel says passionately.

After a quarter of a century working for WASA, Peter Webel will retire at the end of 2022. His eldest son Jannik will succeed him in management in January 2023, while his younger son Eike works as an electrical engineer for the company. The next generation will take the helm at the site in Neubrunn. ■

BENJAMIN BURSCHEY

Riding the wave

Benjamin Burschey joined the WASA team in October 2021. After working for more than 16 years at a major industrial mold manufacturer, he became sales manager for WASA CONSTRUCT. He is therefore one of the most recent additions to the company.

Burschey sees switching to the digital age as one of the biggest challenges that companies have to overcome today. He therefore focuses on this area alongside sales. For Burschey, the biggest challenge here is convincing and motivating all employees to participate in change processes like these. He says that they must feel the positive aspects of these processes in order to accept them.

In any case, the tasks are diverse and demanding. This is especially true regarding smooth raw materials procurement and the constant streamlining of sometimes complex internal processes. These challenges can only be overcome through close collaboration in a strong, motivated team. Burschey is looking forward to ambitious projects, close contact with customers and the diversity of the tasks that his job brings.

For him, the most important thing is to be satisfied after a busy day of work, whether with WASA colleagues or when visiting customers. That is why increasing satisfaction is vital. It creates the energy that leads to the kind of success that he hopes WASA will continue to experience.

When it comes to recharging his batteries, Benjamin Burschey loves spending time on and in water with his family. Riding the waves is, after all, part of his daily professional life. Even when things get a bit out of hand, the water helps in straightening matters out. Because you can always take a dive, if only for a while. ■

WASA STACKING

For the WETCAST technology of tomorrow

01

WASA has significantly supported the developments of the last decade in mold design for WETCAST applications. The publication of CPI Magazine 03/2021 provided a detailed report into mold solutions for automatic WETCAST lines. A modern and fully automated WETCAST plant enables daily outputs of up to 2,000 m² of concrete products. Popular products here are high-quality terrace slabs as imitation natural or artificial stone, facing bricks for facades or small-format replica cobblestones. Alongside premium polyurethane molds, however, a high-performance production line also requires a suitable stacking support system. WASA's comprehensive product range responds to this need by combining the WOODPLAST® boards as a stacking support and the polyurethane casting molds to form an effective system for the production of WETCAST concrete products.

WASA WOODPLAST® products have enjoyed over a decade of success as self-stacking pallets in the WETCAST industry. During this period, the WASA WOODPLAST® support system has been perfectly adapted to the needs of customers and system/plant suppliers.

02

The specific requirements for a support system in the WETCAST industry are as follows:

- A sophisticated interlocking system for centering the individual boards in the stack and for preventing displacement during transport
- The bottom board in the pallet stack bears the full weight of the concrete products, molds and system
- Permanent securing of the entire assembly with bolts
- High abrasion resistance on the underside of the board
- Boards used on one side only. The boards cannot be turned over due to the mounted feet or supports
- Maximum occupancy area despite mounted feet or supports
- Level and sealed surface
- Load spread laterally and longitudinally
- Low dead weight
- Easy assembly of molds and accessories

"A modern and fully automated WETCAST plant enables daily outputs of up to 2,000 m² of concrete products."

03

CYCLE OF A WETCAST SYSTEM AND SUPPORT SYSTEMS HANDLING

An assembly consisting of WASA WOODPLAST® support boards, feet and self-standing polyurethane mold is delivered fully preassembled. The block arrangement, individual filling positions and demolding technology are discussed with the customer in advance with the help of 3D design technology. The mold layout and block arrangement are adjusted to the requirements of the system. The concrete producer can commission the system immediately without complex assembly.

After filling the molds for the first time with a special cast concrete, multiple WASA WOODPLAST® support systems are combined to form a pallet stack. A complete stack can consist of up to 20 support boards with concrete products and molds. In this case, the total weight can easily surpass 2,000 kg per stack. The bottom board bears the entire load in this application. The existing C profile on the sides not only serves as a lifting and grasping area for handling these loads, but also bears a portion of the load itself. Once the specified stack height has been reached, the entire stack is transported into the curing chamber. The curing time of the concrete and the amount of time it spends in the chamber vary according to recipe and are controlled by a computer. The support systems and molds are fitted with an RFID chip so they can be tracked in the system. The block arrangements, volumes and properties of the molds to be mounted are stored in the master data via the system software. The completed production cycles can be traced at all times.

The stack transfer unit takes the pallet stack with the cured concrete products from the curing chamber and transports it to the destacking unit. Here, the individual support boards are synchronized via a pawl conveor to the demolding robot. The polyurethane coating of the support boards glides on the steel rails of the pawl conveyor as it travels. The operational distance covered during daily use adds up to more than 50 kilometers over 10 years. To prevent the steel pawl conveyor from wearing into the underside of the board, WASA uses a special polyurethane coating with Shore hardness D70. Uncoated production boards made from engineered woods are unsuitable for this purpose due to the greater friction between the steel and wood surface.

The polyurethane mold and support board form a perfectly coordinated system whose benefits are also apparent when removing the concrete products from the mold. In the automatic WETCAST industry, there are two predominant techniques for demolding concrete products in automatic production lines: the use of a demolding robot with vacuum suction cups or rolling out the concrete blocks using a roller. The latter is primarily employed with small-format concrete products such as facing blocks for facades.

When it comes to cost-effectiveness and sustainability, the WASA support system not only boasts many years of use in industry, but also a solid wood core produced from regional and sustainable forestry. In the past, solid steel structures were also used alongside the WASA WOODPLAST® support system. However, steel structures have to be regularly oiled against corrosion in a concrete facility. This is not necessary when using a WASA WOODPLAST® support system. The WASA system is also impressive in terms of the ratio of its own weight to the potential load-bearing capacity. Molds and accessories can be mounted quickly and easily with threaded wooden bolts. In the event of damage to the surfaces, e.g. due to the replacement of old molds, the customer can effectively repair the assembly holes themselves using a special repair kit.

01 | WASA STACKING system for self-standing, frameless WETCAST molds. The cone cast on the spacers prevents the individual supports from slipping

02 | To prevent moisture from getting into direct contact with the wood, all existing holes were filled with polyurethane and re-milled to the final dimensions

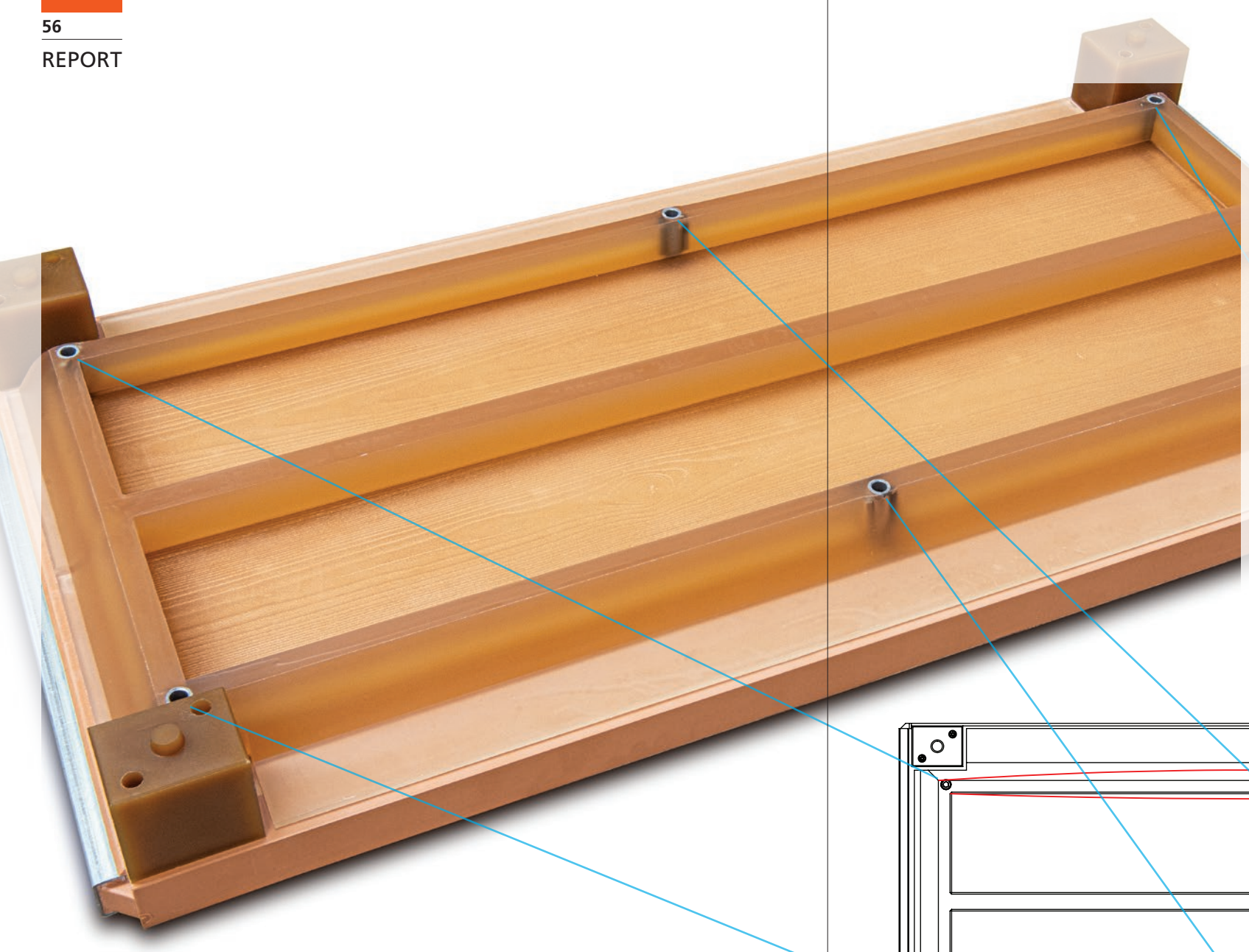
03 | Planed surface

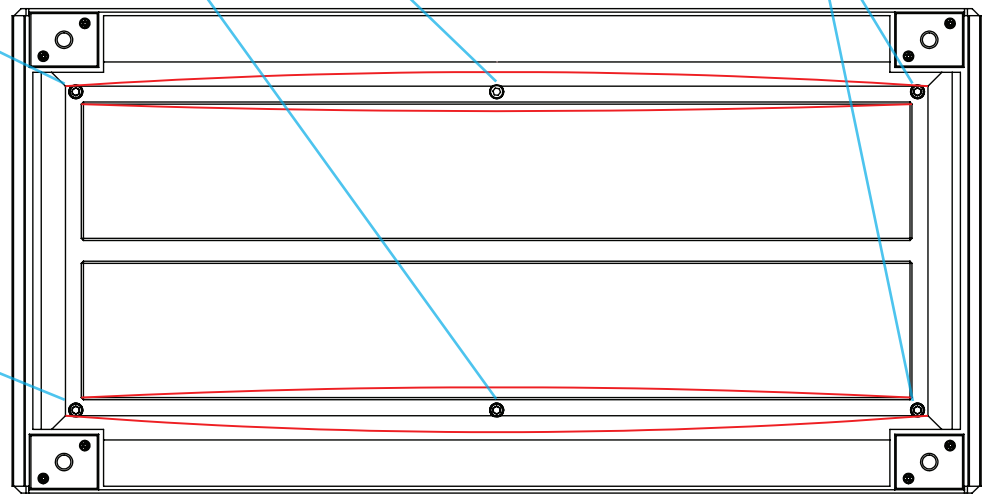
04 | Stacking system with solid plastic feet and wooden support frame

Another new WASA product is the support system made from beech wood. This displays even greater flexural rigidity. A further special feature included for the first time is the ability to finely adjust the side edges using eccentric screws on the long sides.

To prevent irregularities when casting the PU molds, the process utilizes a firmly enclosed casting for the first time. The enclosed cast kept the thickness of the mold base even. This ensured that the mold lay level on the stack support system, and that the side walls are always perpendicular on the support system. The surface of the stack support is milled level to prevent any unevenness.

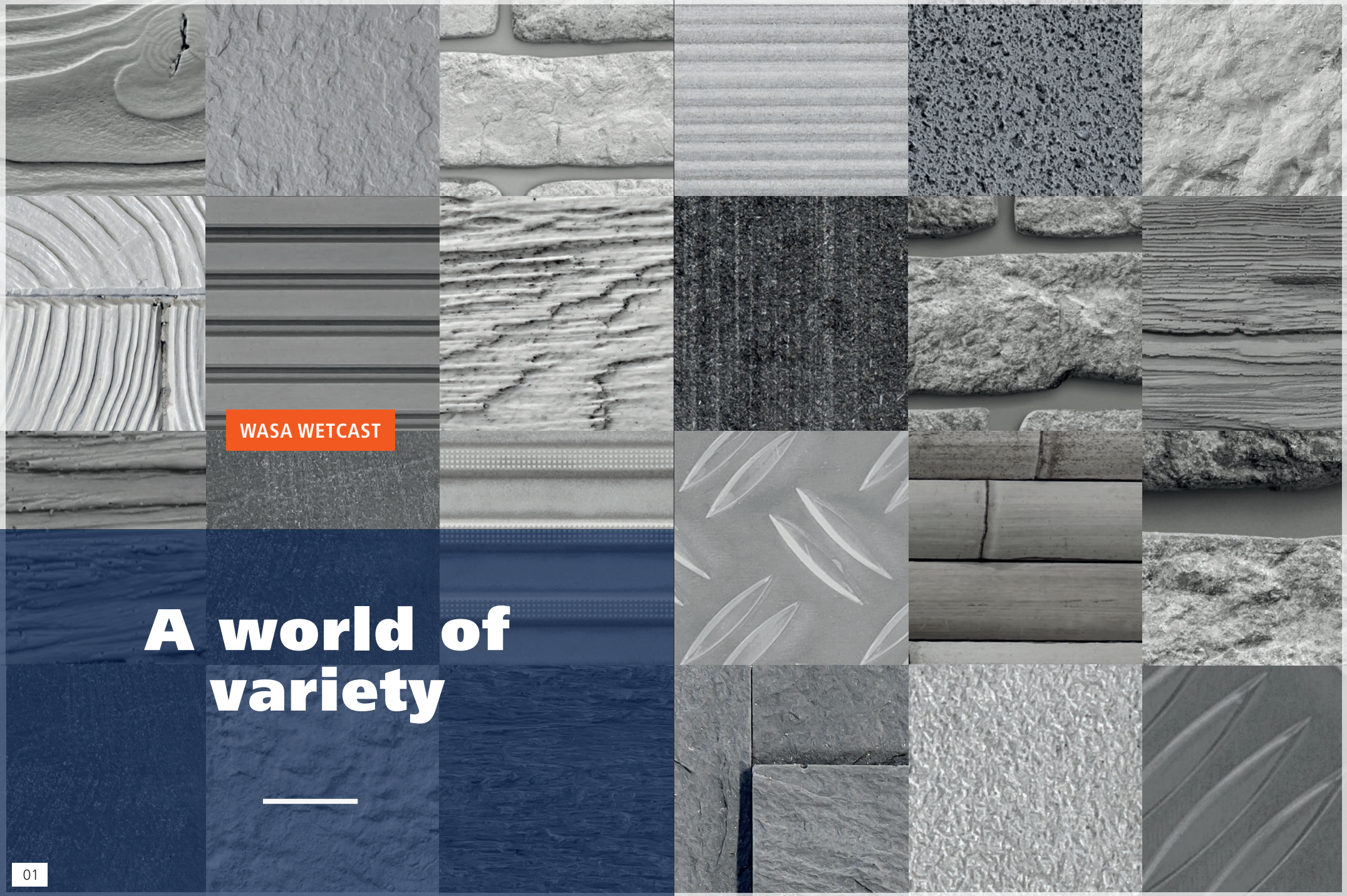
The entire WASA product portfolio is all about innovations. Our customers are therefore ready for the future with the WASA STACKING support system. ■





Self-standing mold with steel sleeves for fixing and fine-tuning on the support system

"The bottom board in the stacking system supports over 2,000 kg."



WASA WETCAST

A world of variety

01

02

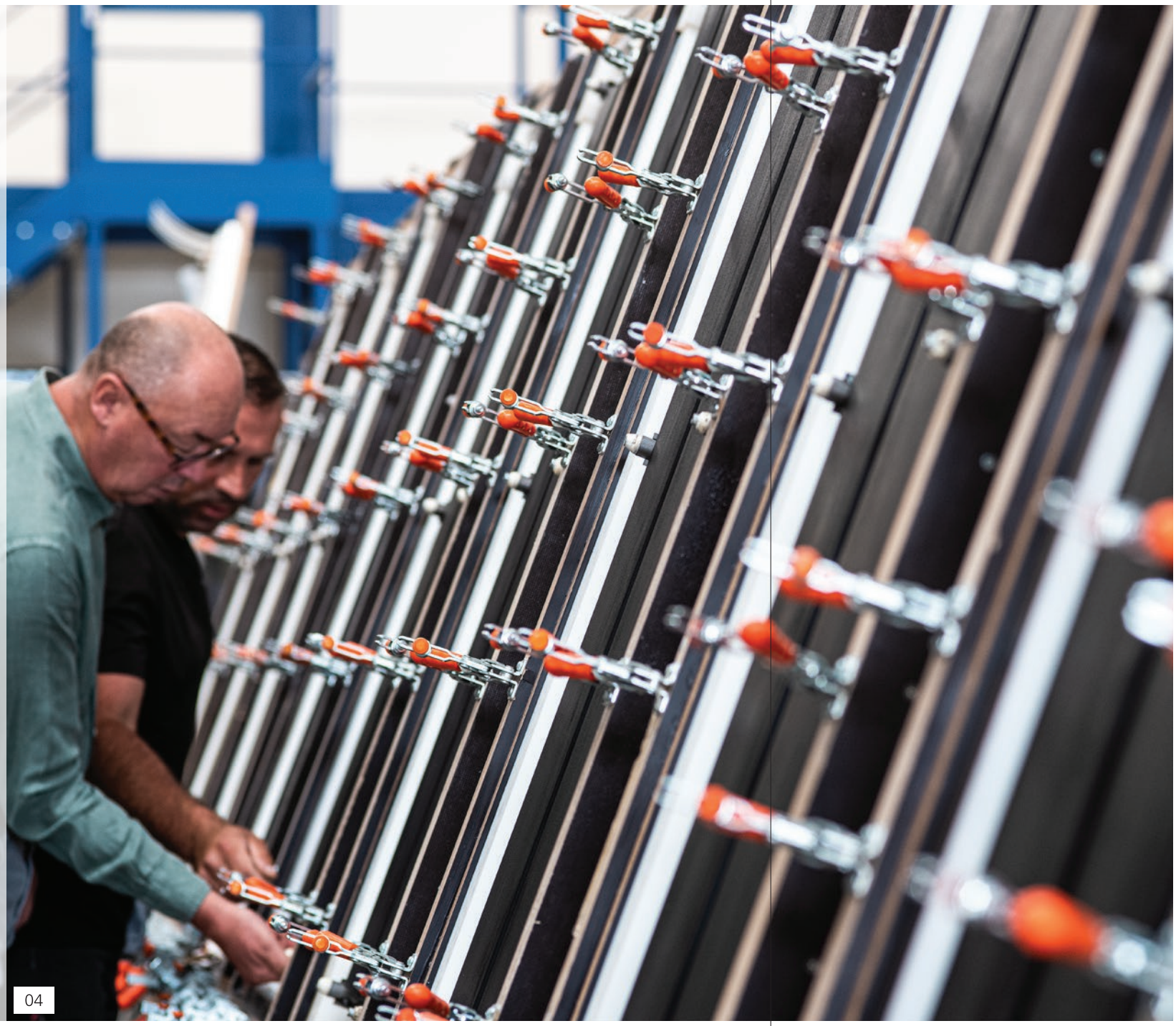
WASA Compound GmbH & Co. KG has been delivering high-precision molds made from high-quality polyurethane and silicones to demanding customers since 2007. The WET-CAST process enables the efficient production of concrete products, even in series.

With proven craftsmanship and state-of-the-art technology, WASA manufactures casting resin molds that meet individual customer requirements and highest quality demands.

As an ambitious company with a rich tradition, WASA is dedicated to identifying future needs and trends on the market. WASA responds to these new challenges through multiple approaches. By doing so, the company advances its own development and drives pioneering innovations in the industry.

Adapted to customer requirements, WASA produces small and large molds with a high stability and enormous mechanical strength. One of the most impressive things here is the virtually unlimited variety of potential surfaces. Virtually anything is possible, whether structures with a contemporary look, wood and stone surfaces inspired by nature or in

03



04

tricate patterns. What unites them is an unrivaled attention to detail. WASA produces all prototypes in its in-house model workshop. These are then finalized in close collaboration with customers, before being developed into model templates for dimensionally accurate single and multiple molds.

The newly developed WASA WETCAST support frame will perform an important role in the future when it comes to filling large-format products. It keeps the mold astonishingly stable by counteracting the pressure of the concrete. This reduces the products' gap size to a minimum. WASA produces its cast resin molds using 100 percent color-neutral and top-quality polyurethane. An in-house developed pouring unit makes it possible to cast the mold without enclosing disruptive air bubbles. The result is a consistent, superb, aesthetic and absolutely flawless concrete product.

The various masters are arranged on the casting table in rank and file. The casting models are then sealed with a cover to ensure precise venting. A final check is made in advance to make sure that all the necessary fittings are stowed away in their place. Once everything is in order, the model is filled from below with the mixer.

This enables WASA to set new benchmarks when it comes to product quality and variety. The result is an impressive and constantly growing list of satisfied international customers, who can rely on WASA's expertise when implementing projects of all kinds. ■

05

07

06

"Whether very small or very large, we mold visions."

01 | An impressively diverse range of surface structures

02 | Producing a silicone master mold

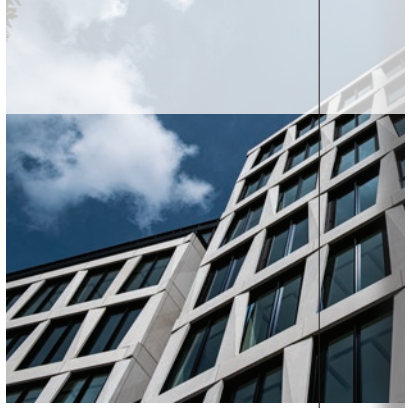
03 | Structure of the silicone mold compared with the natural material

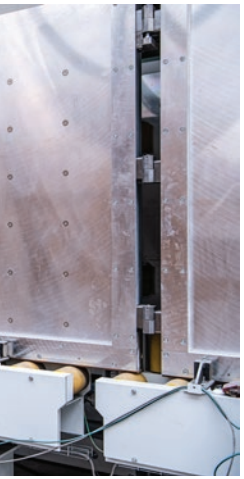
04 | Inspecting PU molds

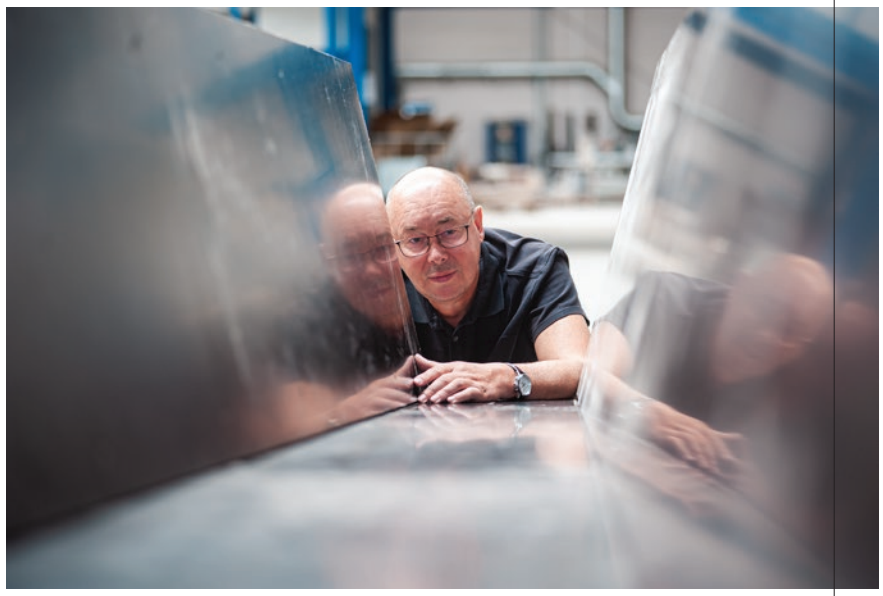
05 | Highest quality: continuous production of PU molds

06 | Ready for filling

07 | PU injection







NEW SALES REGIONS | WASA CONSTRUCT goes west

MAKING OF | concrete[23] – The making of a company magazine

REPORT | Production depth at WASA

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Europaplatz 4
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REPRESENTED BY
Matthias Bechtold (CEO)
Peter Webel

CONTACT
Telephone: +49 6151 7808-500
Telefax: +49 6151 7808-549
info@wasa-technologies.com
www.wasa-technologies.com

EDITORIAL STAFF
Matthias Bechtold, WASA
Dr. Arno Schimpf, WASA
Jannik Webel, WASA
Susanne Anding, WASA
Nico Wallfarth, NIC HAY

DESIGN & PHOTOGRAPHY
NIC HAY PHOTOGRAPHY & DESIGN
www.nic-hay.com

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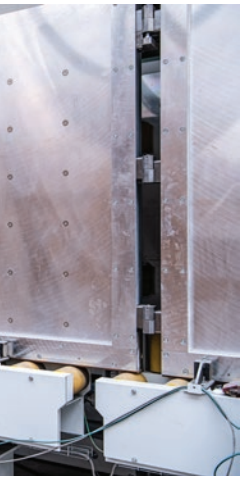

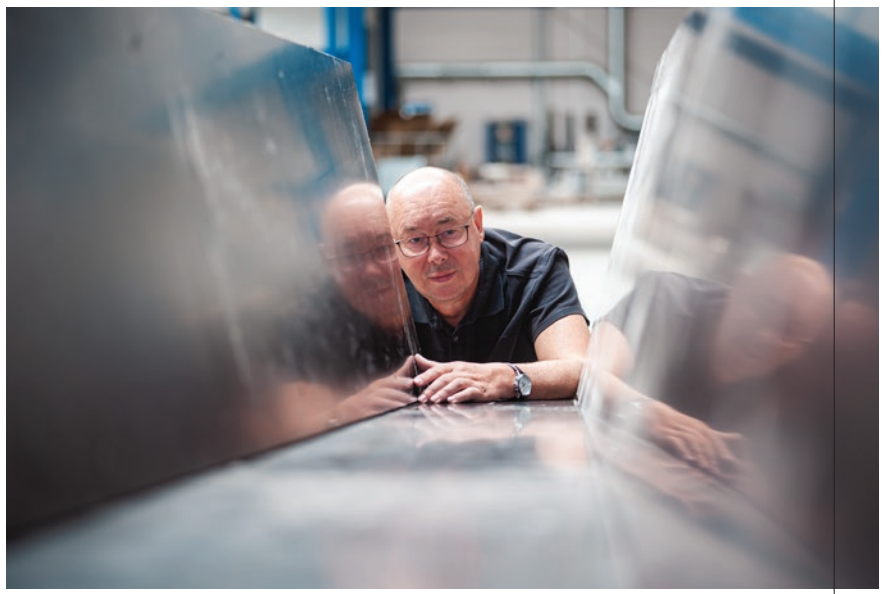

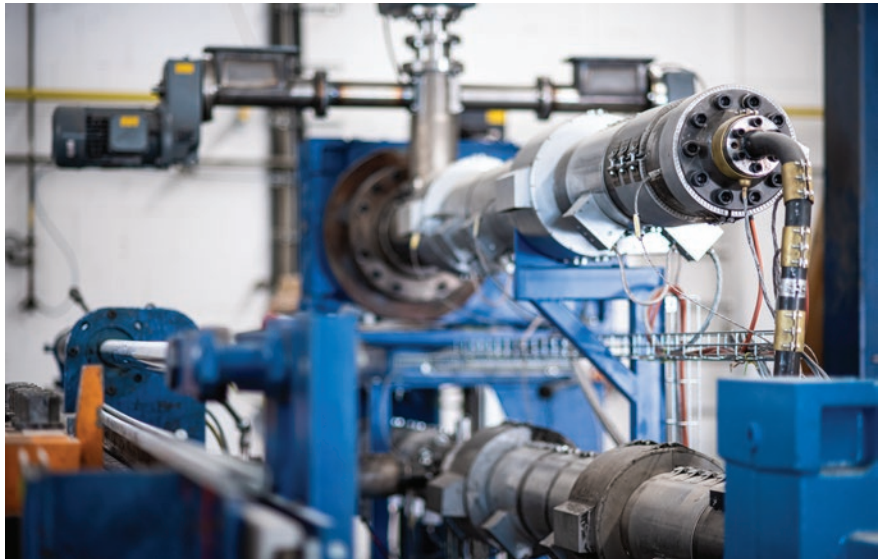

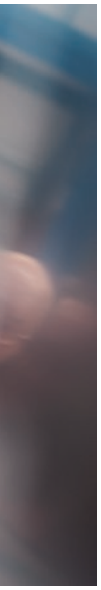

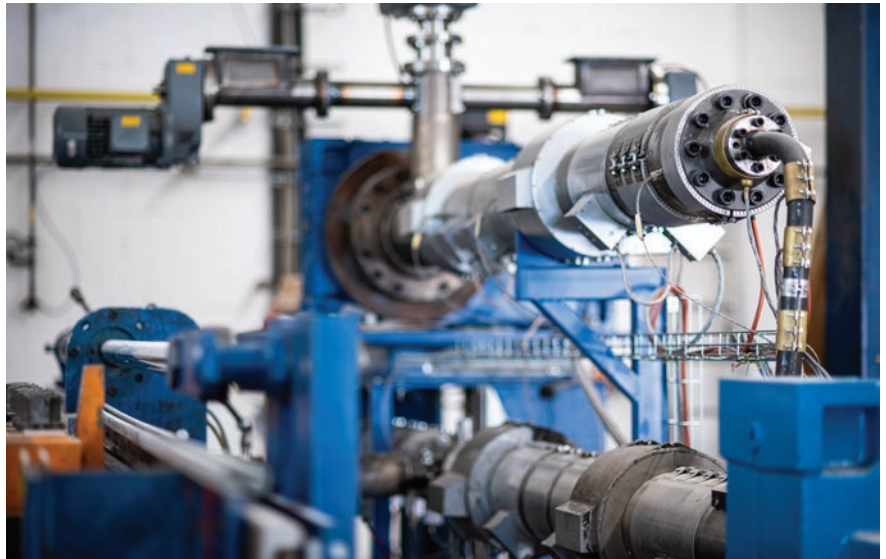

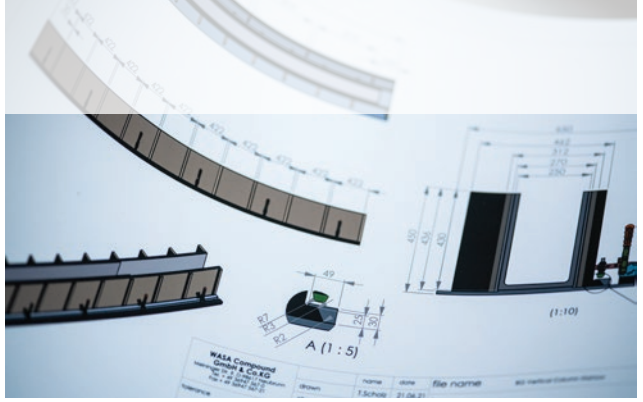
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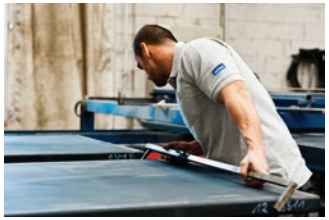

NON PLUS **ULTRA**

More than 6 million of our WASA UNIPLAST® ULTRA boards are deployed in concrete plants all over the world. Many of them have been in use for decades – and are showing no signs of fatigue.

When we developed them at the beginning of the 1990s, we were far ahead of our time. And today, more than 30 years later, we are still ahead of the curve – because, while decades have passed, our determination to make what is strong even stronger, to make what is efficient even more efficient, and therefore to make good products and services even better has remained the same.

At WASA, this virtue has become a tradition – so that the best always remains the best.

WASA®

Competence Leadership.

WASA-TECHNOLOGIES.COM