concrete 20 | compact

WASA COMPANY MAGAZINE



INTERVIEW | HEINZ BECHTOLD | WASA – Where it all started.

REPORT | WASA PRECAST | Neuer Kanzlerplatz, Bonn: Dynamism in form

REPORT | NEW WOOD PRODUCTION | Ready for the future



Competence Leadership.

FOREWORD



DEAR READERS,

In 2020, the coronavirus pandemic has the entire world firmly in its grasp. Every minute, live tickers send the latest terrifying news to smartphones, televisions or computers, while news programs and talk shows have been consumed by the topic of the virus. The economy has taken a hit unlike anything seen since the end of World War II.

There is no doubt: For many, 2020 has not been a year to celebrate.

However, for WASA it is. In this edition of concrete²⁰ compact, we look back proudly on 60 years of company history. Take a journey with us across six decades of production boards – from the early days of pine boards, all the way up to high-tech boards with glass-fiber reinforcement. Take a look at WASA's liner and mold production and discover how sky-scraper facades are created with WASA's help.

Not only our product portfolio has developed since that time, but also our company magazine! For the first time, it is available in a practical A5 format.

Enjoy reading our magazine and stay healthy!

Yours, Matthias BechtoldChairman and CEO of WASA AG

LOOKING BACK

ADVERTISEMENT, 1991

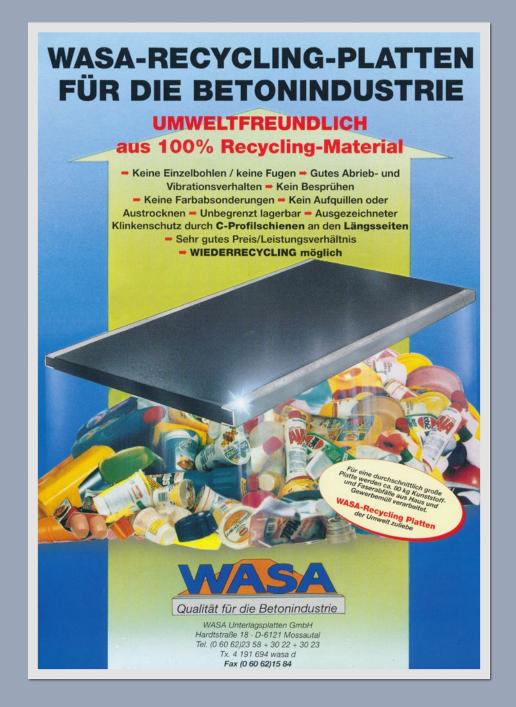




FIRST BROCHURE, 1990



ADVERTISEMENT, 1991





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BAUMA 2019

BAUMA 2019



very three years, the construction and construction materials industry turns its gaze to Munich. As one of the world's largest trade fairs, bauma has undoubtedly become the leading event in the construction and construction machinery sector. And WASA has been an ever-present guest in Munich for the last 30 years.

In 2019, bauma provided the perfect opportunity for a completely revised stand, which from now on will be strategically located in the center of the B1 hall between two leading German machinery manufacturers. With the change in location came a change in size – our stand has increased in area from 60 m^2 to 100 m^2 – and with this size increase, sufficient space for all renowned WASA products, as well as the innovations presented to the public in 2019.

WASA PRECAST

The external facades of the 30 entrances to the Puskás Aréna in Budapest were being created using PU molds designed and produced by WASA measuring an impressive 7 x 2.20 meters. WASA delivered a total of ten of these molds to the Hungarian customer, with visitors to the trade fair stand able to admire one of these original molds. "With a net weight of almost 2,000 kg, these precast molds are the largest and heaviest liners that WASA has ever cast," comments the project manager responsible, David Werning. The order for the soccer stadium in Budapest was already the second project that WASA was able to win in the precast parts sector: Back in 2018, WASA provided the molds for the ceiling cladding at the new Bond

Street station as part of the Crossrail project in London, one of the largest railway projects in Europe. And visitors to bauma were also able to gain fascinating insights into this project. "WASA PRECAST is increasingly developing into one of the elementary business areas at the WASA Group," comments

Dr. Arno Schimpf, Managing Director of WASA Compound GmbH & Co KG., the company responsible for this sector. With annual turnover increases well into the double-digit percentage range, WASA PRECAST is the fastest-growing brand in the Group.



WASASOFTW WASAWOODPLAST



WASA WOODPLAST®

Visitors to the bauma trade fair were also able to discover innovations in the area of production boards, with WASA presenting an alternative to WASA WOODPLAST®. The established production board made from a wood-plastic compound material will also be available without outer profiles from now on. As such, WASA is meeting the requests of some customers who wish to avoid conventional C profiles, such as those installed in WASA WOODPLAST® as standard. "We continue to see added value for the customer in products with C profiles, as they effectively protect the PU coating from damage. This design will therefore remain the standard," explains Matthias Bechtold, Chairman and CEO of WASA AG. "For those who want to omit the outer profiles – for whatever reason - WASA WOODPLAST® without profiles is the perfect board," Bechtold continues.





WASA SMART FLAKES

06

WASA ACCESSORIES

Also displayed at the stand was the brand new range of WASA ACCESSORIES: Alongside polyurethane-coated latches for board feeds, WASA also offers structured sealing tools for formwork technology in plants for concrete precast parts.

WASA SMART FLAKES were a further new solution: This is an organic biodegradable granulate for separating sensitive stone layers that is 100 percent biodegradable. WASA SMART FLAKES offer an interesting and above all environmentally friendly alternative to conventional plastic nets or ropes, which are inserted between the stone layers in a stack to protect the top sides of the stones. Comprehensive tests at customer sites and at the Weimar Institute of Applied Construction Research (IAB) not only confirmed the effective separation effect, but also the complete biodegradability of the cellulose-based granulate. The granulate can be applied manually to the stones, or using certain dispensing devices such as the T-Rex from Kraft Curing.

- 01 | 02 | The 100 m² trade fair stand is visible from afar and attracts lots of visitors
- 03 One highlight of the stand was a 7 x 2.20 meter large polyurethane mold, which was developed by WASA for the new Puskás Aréna in Budapest
- 04 | 05 | The different WASA board types
- 06 | WASA LATCHES with internal steel core and solid polyurethane jacket
- 07 | WASA SMART FLAKES are based on organic cellulose and are completely compostable



PORTRAIT

PORTRAIT



East Europe. The young father and graduate in business management has shone in his job thanks to his strategic approach and ex-

Sales is in the 37-year-old's blood: Alongside his full-time job at WASA, Alexander Simos sells high-quality olive oil under the Blackbird brand (www.blackbird.gr). He is the In his free time, Alexander Simos enjoys spending time with his wife and their son, Ilias. The family regularly visit the Greek island of Lesbos, which is also where his wife Nikoleta comes from. In summer and winter, the cyclist and snowboarder can be found in the great outdoors of the Odenwald region, where the passionate amateur sportsman and his family also live.



HEINZ BECHTOLD

WASA – Where it all started

At the end of the 1980s, Heinz Bechtold proved that you don't need to be an engineer to develop ingenious technical ideas. The founder of WASA had the revolutionary idea of creating a completely plastic production board, thereby setting new standards for the precast concrete block industry which still endure today. 40 years old at the time, Bechtold has spoken to us about the ideas behind his invention, the challenges during the development phase and the worst nightly phone call he has received in his life so far.

Mr. Bechtold, how and when did you come to WASA?

H. B.: In 1978, I had the opportunity to join the trade company Walter Salje in Bielefeld, as there was no successor available at the time. Salje only traded production boards, but did not yet produce their own. WASA Walter Salje GmbH was then founded in 1980 with my involvement and the headquarters moved to Mossautal where my family and I lived.

What types of production boards did Walter Salje have at the time?

H. B.: Until 1982, the company only had softwood boards which were produced for WASA by manufacturers in the south of Germany and in the Odenwald region, close to where we lived. In 1982, we expanded our portfolio to include tropical hardwood – yellow balau and bongossi – which we procured from the Netherlands. WASA later acquired this company.





INTERVIEW

In 1985, we began manufacturing hardwood boards directly in Singapore. We entered into a joint venture with the manufacturer there, Kian Guan Timber, which successfully produced hardwood boards until 2013. This trusted collaboration, which lasted 28 years, did not require any written contract - just a handshake. This all took place in 1985 between the then owner of Kian Guan, Mr. Chua, and me - and would be unimaginable today.

What was your turnover in the early years and how many people did you employ at WASA?

H. B.: The trade company had a turnover of around 1 million marks in 1979. We had two employees: Ms. Sigrid Dingeldein, who began her commercial apprenticeship with me, and myself. For over 35 years, Ms. Dingeldein was an ever-present figure in the growing WASA team. Unfortunately, Sigrid died from cancer in December 2015 – a great shock to all of us at the time.

Back then, production boards were only made from wood. How did the idea of a plastic board - WASA UNIPLAST® - come about?

H. B.: Throughout the 1970s and 80s, hardwood boards grew in popularity as their better vibration transmission offered customers both added value and improved stone products. However, the debate surrounding tropical wood in 1988 threatened to bring these products to an end. An article in IMPULSE magazine drew my attention to a manufacturer of square timber made of recycled plastics. At the time, the yellow trash bag and the dual system of waste separation had just been introduced and there was huge hype surrounding the topic of collecting and recycling plastics.



I then began attempting to join these square timber products made from recycled plastic into a board similar to wood boards, with the final result being the previously unknown product we are familiar with today. However, the experiments quickly showed that a plastic board constructed from single planks was not capable of reproducing the same properties expected by the industry. During the course of further development, casting the plastic boards in a single piece via the extrusion process became the established procedure.

What were the biggest challenges during development and when launching this innovative new board on the market?

H. B.: We had to search for a systems supplier for the plasticizing of synthetic materials. This was no easy task, as we did not have the requisite experience. After all, our product did not exist yet and traditional injection molding processes did not work. Once we thought we had found the right system, we then began looking for a suitable location, which we eventually found in Thuringia.

Even before we had produced the first boards, I informed some of my best customers and presented our new product. Despite these new boards being several times more expensive than softwood or hardwood products, I was able to generate interest in our idea. The concrete block plants were mainly interested in the joint-free surfaces. We already had contracts from the US and Germany before we were even able to go into series production. Looking back, all of this was pretty precarious and almost overconfident; we were selling a product that we couldn't even produce at the time. But in the end, everything worked out just fine.

Were there any setbacks you had to deal with and which made you think about giving up?

H. B.: There were more than a few setbacks, but I never thought about giving up. Almost none of the systems we bought reached the promised performance levels, so we had to find our own solutions and in some cases replace system components two or three times. That was certainly annoying and burned through a lot of money.

Talking of burning: In 1996, a fire caused by a dust explosion broke out in the top floor of our production building, forcing us to shut down our manufacturing for several weeks. The damage totaled 2 million marks. Don't ask how I felt when the local fire department woke me at 3 a.m. and informed me that one of the buildings was on fire...

But even after this setback, the staff in Thuringia did what they had always done: Without exception, everyone rolled their sleeves up and worked around the clock, enabling us to start production again after just three months. Thankfully, we were insured against interruptions to operations, and were able to recover a large part of the costs incurred.

Today, over five million WASA UNIPLAST® boards have been delivered and it is still the best-selling board in the WASA range. Did you ever imagine such immense and long-standing success at the start of the 1990s?

H. B.: Yes, I had great confidence in our new product. If you don't believe in what you do yourself, you may as well stop right there. My belief in the all-plastic board was further

INTERVIEW

INTERVIEW

strengthened as I knew the concerns and requirements of concrete block manufacturers and knew what they needed – a joint-free board that, if possible, could be reground and reused with short vibration times, and therefore good compaction of the concrete products. The concrete block industry also follows the mantra of "time is money".

With service lives of up to 20 years, we have to ask the question: Is WASA not damaging its own business if the boards are so durable?

H. B.: This question is asked often. The boards have a price and the customer expects a service life of around ten years, to ensure that the higher initial investment costs are worth it. Our offer of grinding the board is a winwin situation too: This gives WASA a further value creation avenue, even if we do not sell new boards, and the customer can use the reground boards at a fraction of the price of replacements.

A further benefit of all-plastic boards without profiles is that existing boards can be cut to smaller sizes, which also means that used all-plastic boards can be readily sold on the market. This is generally not the case for conventional wooden boards, as they often display high levels of wear and tear after several years in use, as well as joints.

At the end of 2011, you stepped down from operative business and switched to the supervisory board. How does a true entrepreneur like you fill the day without becoming bored?

H. B.: As I am not only on the supervisory board, but am still co-owner, a lot of things still connect me to the company and the decisions made. At the same time, I look back

with great satisfaction at the time in which almost everything I imagined came true. This alone and the fact that my son took my place almost ten years ago give me a great sense of fulfillment.

I also have a voluntary position as a mentor for economics at the economic development agency for the Odenwald district. Here, together with other former entrepreneurs, I support both young founders and established companies with the strategic orientation of their business plans.

- 01 | An interview with Heinz Bechtold
- **02 | 03 |** Looking through the image archive a trip through eventful decades at WASA
- 04 | Heinz Bechtold in lively conversation
- 05 | Heinz Bechtold



WASA – Milestones

- **1960** Founding of trade company Walter Salje
- **1980** Renamed WASA Unterlagsplatten GmbH; start of own board production
- **1985** Joint venture with Kian Guan Ind. in Singapore to manufacture boards from hardwood
- **1991** Production of WASA UNIPLAST® commences
- **1996** Peter Webel joins the management board
- **2003** Acquisition of Dutch competitor Holzindustrie Hardenberg
- **2007** WASA WETCAST launched
- **2011** WASA WOODPLAST® is born
- **2012** Matthias Bechtold joins the management board
- **2014** Acquisition of German competitor Tecboard and renaming to WASA AG
- **2015** 25 years of WASA UNIPLAST®
- **2016** Dr. Arno Schimpf joins the management board
- **2017** New business area WASA ACCESSORIES
- **2019** New business area WASA PRECAST
- **2020** 60 years of WASA
- **2020** Tobias Hess joins the management board

REPORT

WASA -

1980

The success story in images

First WASA sales office *Mossautal*



1980

First trade fair stand at bauma *Munich*



1985

Start of hardwood production Singapore



Procurement of WASA building
Neubrunn



06/1991

Discussion on conversion and expansion Neubrunn



11/1991

An important moment – Heinz Bechtold begins production of WASA UNIPLAST®

Neubrunn



REPORT



11/1991

Kitchen and canteen in one *Neubrunn*



1998

Construction work on the new production building 2

Neubrunn

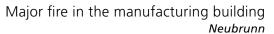




Commissioning of the new manufacturing plants 4 & 5

Neubrunn







1997

REPORT



2001

Discussing the situation Neubrunn



2005

Completion of the new wood production facility

Neubrunn

2007

Production of WETCAST molds begins – initially by hand *Neubrunn*





2007

Presentation of WASA UNIPLAST® ULTRA with glass-fiber reinforcement bauma, Munich

REPORT



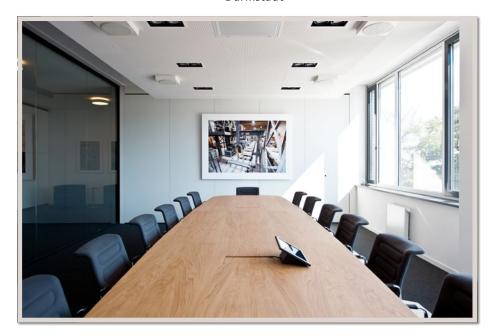
WASA WOODPLAST® is born *Neubrunn*



2014

Relocation of company headquarters to Darmstadt

Darmstadt





2019

Production of the polyurethane precast molds for the new Puskás Aréna in Budapest Neubrunn



INTERVIEW



If there is anyone on the staff who has accompanied the all-plastic WASA UNIPLAST® from the very start, then it has to be Peter Geiss – the first employee at the Neubrunn site in Thuringia in 1991. This year, the shift supervisor for plastic board production ends his career at WASA and starts a new chapter of his life. He took the time to sit down with us and look back at almost 30 years of living and working with production boards.

Mr. Geiss, as the first ever employee at the Neubrunn site, you are now leaving to your well-earned retirement. How are you feeling? What are you thinking about?

P. G.: It's still a bit surreal to start a new stage of my life after so many years; it is still an unfamiliar feeling that I haven't quite grasped yet. But I am slowly beginning to look forward to the next step.

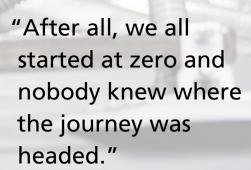
Daily life without WASA: What will you miss the most?

P. G.: The time spent with close colleagues. And maybe the strictly organized schedule each month, or throughout the course of the year. You prepared for your days off and looked forward to every single free day. I will also miss the social side of things among the staff, as we always found something new to talk about.

INTERVIEW



INTERVIEW





01 | 02 | 03 | Peter Geiss in different work areas at the WASA production building in Neubrunn, Thuringia

Your daily routine will be completely different once you retire. What are you looking forward to? What plans do you have to fill your days?

P. G.: I enjoy spending time outdoors in my free time and have a large garden that needs tending to! Now I have the time to plan the tasks in peace and take a break every now and then. And I can also spend the weekends and holidays with the whole family and particularly my grandchildren. I don't think I'll have time to be bored!

Do you have a favorite memory from your time at WASA?

P. G.: I fondly look back at the first company parties, where we only had a few employees and I had some excellent and close personal contacts. We even organized a bus trip together for some of the Christmas parties. Unfortu-

nately, this individuality is no longer possible thanks to the large increase in employees. I can also remember the time that a pig was slaughtered for a party and we extended the celebrations by one day.

In your opinion, what was the biggest challenge WASA has faced so far?

P. G.: At the beginning, the entire production process was very much improvised and therefore required lots of manual work. We also had to get to grips with the topic of plastic and its special properties. Initially, the goal was to meet the familiar parameters of a wooden board with regard to evenness and flexural stiffness, before then convincing the customers of the other benefits of the plastic board. Increasing productivity was another focus of all our efforts and investments.

At the start of your career, would you ever

have imagined that WASA would become the global market leader? How did you experience the ascent and what changed over the years?

P. G.: To answer your first question: truthfully, no. The early days were very difficult and the demands on all colleagues were enormous. The expansion of the site went hand-in-hand with the development of a new product. After all, we all started at zero and nobody knew where the journey was headed. Once the first boards were in use and the customers were impressed by the benefits of the plastic boards, our next goal was to deliver reliable quality and increase productivity. This process is still going on today. Of course, the company now has separate departments for all the different tasks and everyone knows their area of responsibility. There are now also further business areas which – I hope at least – will follow a similarly successful path in the future.



ISABELLA PUTRONE

Talented linguist⁶

Munich, bauma 2019. A new trade fair stand and highly motivated WASA employees from Darmstadt and Neubrunn were ready to receive curious specialist visitors from all over the world. For hostess Isabella Putrone, who had been employed especially for the event, this was the start of a highly frequented and eventful trade fair.

The chemistry between her and WASA was immediately apparent. It therefore came as no surprise that the two parties could not simply go separate ways after seven successful days at the trade fair.

Just four weeks after the bauma 2019 trade fair, Isabella Putrone moved into her new office at the WASA headquarters in Darmstadt. Since then, she has been an indispensable part of the team and is completing her apprenticeship in office management with ease.

Born in Turin, the 26-year-old speaks six languages fluently: In addition to her mother tongues of German, Italian and Portuguese, her repertoire also includes Spanish, French and English.

Thanks to her Brazilian mother and Italian father, joie de vivre and cheerful exuberance are in her blood - characteristics reflected in her interest in Latin American dance, singing and her passion for travel.

Alongside her apprenticeship, Isabella Putrone is also a student at the IST University of Applied Sciences.

She will undoubtedly also successfully master this challenge, and her captivating personality will open up many doors in the future.





Headquartered in Arnstorf, Bavaria, the Lindner Group commissioned WASA Compound GmbH & Co. KG with the manufacturing of 12 different molds with which 30 PU liners were manufactured along with the corresponding production frames. The size of these liners is impressive: The longest model measures 11 meters in length and the accompanying PU liner comes in at a weighty 240 kg.

Glass-fiber reinforced concrete elements were manufactured using the supplied liners, which will form the eye-catching facade of the elegant ensemble of buildings.

The high efficiency with which WASA produces was also evident in the low time requirements for production: Thanks to flexible special shifts, the team was able to complete the order in just two months. The order was placed in mid-June 2020, with the finished products being delivered in mid-August of the same year. All milled parts required for manufacturing the production frames and the casting models were fabricated in a cutting-edge five-axis milling machine. Without this investment, which WASA made at the end of 2019, it would have been impossible to deliver the products within the time frame specified by the Lindner Group.

WASA SHUTTERING

Another innovation also ensured quick progress: WASA SHUTTERING – a method conceived and developed specifically for the manufacture of planar concrete products and registered as a patent by WASA. This procedure means that complex silicone work for sealing formwork and forming chamfered edges is no longer necessary, saving both time and material resources. WASA SHUTTERING also guarantees a uniform joint pattern, the





geometries of which can be adapted to individual customer requirements. The chamfered edges on the precast concrete blocks can be easily reproduced, even when producing large batches.

WASA PUR

WASA PUR also proved itself once again. The extremely fluid two-component molding resin was again extraordinarily easy to process thanks to its low viscosity and the corresponding flow properties, its long pot life and its smooth surfaces.

The facade of Neuer Kanzlerplatz is another addition to the ever-growing list of complex large-scale projects realized by WASA Compound GmbH & Co. KG – further proof of WASA's outstanding innovative strength and first-class quality.



^{01 |} Construction plans created by WASA | 02 | Production frames during manufacturing

A hardened PU liner is removed from the mold approx. 24 hours after being cast, | 03 | checked, | 04 | and transferred to the warehouse | 05 |

^{06 |} Rendering, Neuer Kanzlerplatz, Bonn (© Art-Invest Real Estate Management GmbH & Co. KG)

PORTRAIT

PORTRAIT

TOBIAS HESS

Broad horizons

In July 2020, Tobias Hess joined the executive board at WASA AG and has since been part of the management team at the WASA Group, which until then consisted of Peter Webel, Matthias Bechtold and Dr. Arno Schimpf.

Hess studied commercial law, information technologies and electrical engineering and has an extensive understanding of technical matters. His highly valued and continuously growing expertise of over 16 years in the areas of mechanical engineering and the concrete block industry has developed, for example, as a result of commissioning cutting-edge production plants in the USA and Russia, as well as his work as Managing Director at HESS Group, headquartered in Bur-

The 44-year-old will now be responsible for the global organization and management of He will also complement the in-house R&D department in order to continue driving forlevels of innovation of WASA products – also with regard to Industry 4.0.





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ust this year, WASA invested in a new production line for softwood boards. This system is capable of fully automated manufacturing, thereby achieving greater efficiency.

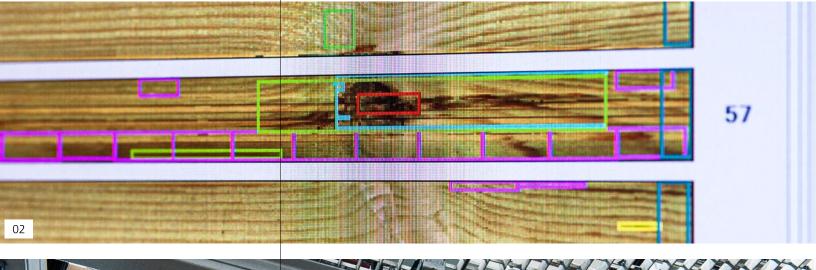
During plank processing and cutting, the individual wood planks are scanned using a high-resolution camera. Special software recognizes whether the planks contain tree gum, branches or even have cracks. These defective areas are cut out, or the planks are rejected completely. The parts are cut and interlocked in a fully automatic process.

Following this, each individual plank passes through a light barrier on the way to the glue station. This barrier records the exact position of each individual plank and sprays a highly durable polyurethane-based glue across the entire plank, thereby guaranteeing that the planks are joined together permanently.

At the next station – the molding presses – the glue is distributed in an optimal way by applying a constant pressure. The press cycle comprises 15 vertical pressing carriages, each with a cycle rate of just one minute. This new process technology has enabled WASA to cut the cycle rate in half and thus double the production capacity. The total number of presses was adapted to the exact pot life of the PU special glue. The vertical orientation saves significant amounts of space in the plant, which in turn results in added freedom of movement and safety for the employees.

After leaving the press frames, the production boards are completely glued and pressed.

After they have been lowered by 90 degrees and transported to the next station, the Fanuc robot waits for the freely accessible boards in order to place them on another track in a ver-









01 | New wood production | 02 | Scanned surface | 03 | Mold press | 04 | Pressing carriage and frame | 05 | Edge cutting machine

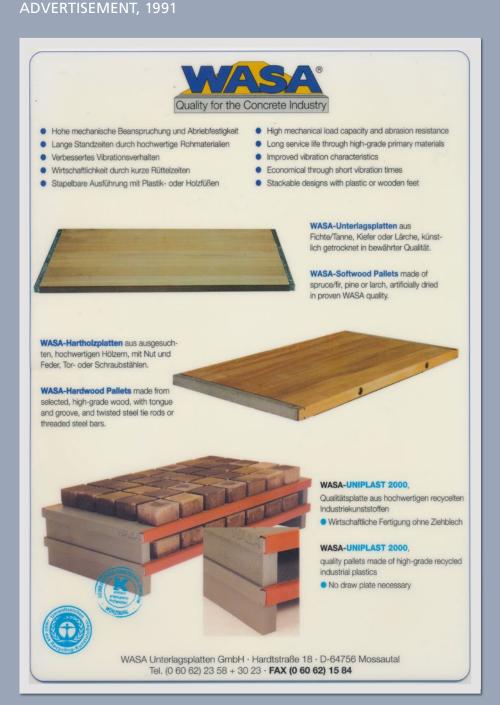
tical position. Outside the hazard area, small imperfections or branches in the wood are filled in on a turret.

Following this processing step, the boards are then moved on to the remaining production process. In a paternoster, a buffer of up to 360 boards is built up in order to ensure ongoing production, even in the event that the press stops. The boards subsequently pass through three further processing stations: a double-end tenoner, an edge cutting machine and a chamfering planer.

The final finishing steps include grinding and impregnating. To conclude the new production process, the WASA profiles are then mounted and riveted. Thanks to the exten-

sive modifications in wood production, WASA has succeeded in making the production of WASA SOFTWOOD and WASA WOODPLAST® boards – the polyurethane-coated wood cores of which are also manufactured here – even more efficient, doubling the manufacturing capacities.

Innovation and quality need each other. With its new wood production capabilities, WASA is well equipped to meet the ever-growing demands of the market.



WASA WOODPLAST | The latest machinery enters operation.

FUTURE | The next generation is ready to get started.

WASA PRECAST | Neuer Kanzlerplatz, Bonn – the facade is growing.

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PUBLISHER

WASA AG Europaplatz 4 64293 Darmstadt

REPRESENTED BY

Matthias Bechtold (Chairman) Peter Webel **Tobias Hess**

CONTACT

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

EDITORIAL STAFF

Matthias Bechtold, WASA AG Dr. Arno Schimpf, WASA AG Susanne Anding, WASA AG Nico Wallfarth, NIC HAY

DESIGN & PHOTOGRAPHY

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

PRINT

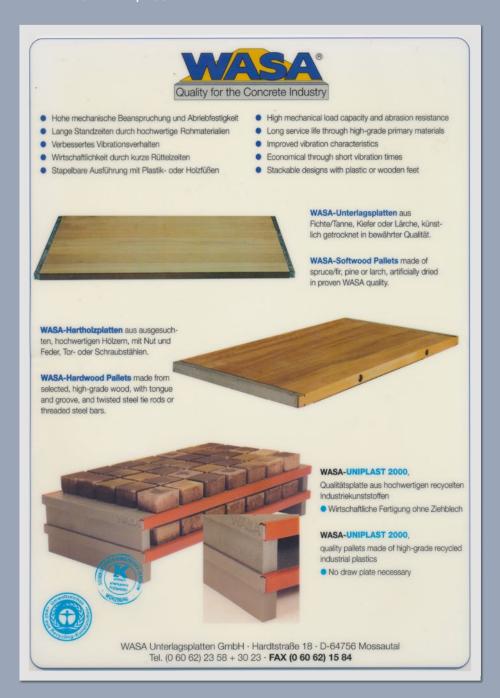
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LOOKING BACK – WASA advertising in the 1990s and 2000s

ADVERTISEMENT, 1991



ADVERTISEMENT, 2008



ADVERTISEMENT, 2009

WASA UNIPLAST®

ADVERTISEMENT, 2008









Intuition became a vision, and a vision became the goal: WASA has been setting new standards in the concrete industry for six decades – always with the ambition of making good products even better. As the world market leader, we are motivated to stay a step ahead of the competition without losing sight of our tradition. We focus all our energy on the challenges of the future, and will continue to do so for the next 60 years.



Competence Leadership.

WASAROARD

WASACONSTRUCT

WASA ACCESSORIES

WASASERVICE

WASA-TECHNOLOGIES.COM