Dear readers,

Quite a lot has happened since the last issue of our customer magazine. But we are pleased that you can now hold the latest edition of Pre-Fab in your hands. While we have some very interesting projects to report on this year, it is our company anniversary that is truly exciting: 60 years, especially in the fast-moving times we live in, is no trifling matter.

We are aware that we would not have been able to celebrate this anniversary without you, our customers and users, and of course not without our employees. This is why we would like to thank you our customers for your trust in us through all these years. We would like to thank each and every Weckenmann colleague both at home and abroad for your creativity, your diligence and your tireless commitment to serving our customers.

We hope you enjoy reading all about it!

Kind regards

P.S. We would like to receive your suggestions and criticism. Write to us at info@weckenmann.com

Successful plant modernisation

Retrofit increases productivity
by 15 per cent

The manufacturer of precast concrete parts Andernacher Bimswerk GmbH & Co.KG (ABI) manufactures precast floor slabs, double walls and solid floor slabs for industrial and private buildings at three locations in Germany for the German and European market. ABI operates a high-performance circulation system at the Bedburg site in the Rhein-Erft district 40 minutes by car north-west of Cologne.

ABI has been a Weckenmann customer for 30 years. Many of the plants and systems with which ABI produces the precast concrete parts at its Bedburg factory bear the Weckenmann logo. This includes the new fully automated magazine robot and the new transport roller conveyors which the Weckenmann specialists have implemented at ABI as part of a retrofit project.

The new Weckenmann storing robot in use at Keegan in Ireland.
Photo: Weckenmann

Installation in just one week

Installation of the new components and commissioning of the modernised plant at ABI in Bedburg proceeded as efficiently as the design and construction of the new components in Dormettingen. The old components were dismantled and the new systems installed within just one week – during the Easter holidays – by the practiced “ABI-Weckenmann team” of technicians, fitters, technical supervisors and machine operators. ABI was able to restart production in the modernised plant seven days after the conversion. ABI now produces floor slabs and double walls in three shifts on the plant. The modernised plant has already proven itself and ABI expects an increase in productivity of around 15%. All in all, a successful retrofit project.
New generation of robots makes its mark

In addition to ABI, the Irish manufacturer of precast concrete parts Keegan Precast Ltd. is also sold on the new generation of robots and storing units from Weckenmann. Keegan is one of the leading suppliers of precast concrete parts in Ireland and the UK and has been producing walls and floor slabs on state-of-the-art plants north-west of Dublin since 2005. The new generation of robots from Weckenmann is successfully used in the new circulation system installed in 2017. You will find more details to this topic in our next issue.

Mischek relies on MagVib

The Austrian company Mischek Systembau GmbH produces high-quality reinforced precast concrete parts on a production area of 30,000 square metres and uses MagVib, the innovative high-frequency concrete compactor from Weckenmann.

Mischek Systembau GmbH produces approximately 30,000 precast concrete parts annually at its precast concrete plant in Gerasdorf near Vienna. As much as 95,000 tons of concrete are processed annually into Mischek solid walls, floor slabs, double walls, solid slabs and other precast concrete parts. Mischek's precast concrete parts enjoy an excellent reputation among architects and planners. “We want quality and only produce with production facilities from renowned plant manufacturers”, says Mischek engineer Martin Nagl and continues: “When a new concrete compacting station was scheduled for our circulation system, we did a thorough search and then decided on Weckenmann’s MagVib system.”

The MagVib compacting station from Weckenmann is used in the Gerasdorf plant on a pallet circulation system. “We decided on the MagVib system, because we determined that the conventional technology with vibrating trestles was not efficient enough and also noticeably louder,” explains Mischek’s, Martin Nagl. The MagVib system has proven itself at numerous Weckenmann customers. In this high-frequency compaction for plastic to stiff concrete types, the mounted external vibrators are non-positively docked on the vibrating plates by means of electromagnets attached to the undersides of the shuttering pallets. The high-frequency vibrators shake the formwork with specific vertical vibrations. In the MagVib technology, the so-called vibration energy is distributed directly and consistent into the precast concrete part.

Less noise through magnetic coupling

“At Mischek we achieve the same excellent compaction results with MagVib on the circulation system with pallets as we know it from the shuttering tables equipped with fixed vibrators”, says Dietmar Kiene, sales manager at Weckenmann, adding: “The magnetic coupling of the vibrators to the shuttering pallets also significantly reduces noise emissions, which has a positive effect on the working conditions throughout the plant.” Comparative noise level measurements have shown that with the MagVib, noise pollution could be reduced by more than 10 dB compared to the conventional high-frequency compactor.

Conversion to MagVib is possible at any time

“In view of the benefits of the proven MagVib system, also on circulation systems, we always recommend looking at switching to MagVib in modernisation projects”, says Weckenmann’s Dietmar Kiene, “because existing plants can be retrofitted without difficulty at any time.”

Local manufacturing in India

A Weckenmann company, Weckenmann Engineering (India) Private Limited, based in Bangalore, India, and managed by our colleague, Ans Hariharasudhan was established in 2016. Weckenmann started production on the Indian subcontinent at the beginning of this year. Shuttering pallets, production lines and moulds for columns and beams are produced for the local Indian market according to the Weckenmann standard and German quality requirements. The technical designs all come from Germany and correspond to “German Engineering”. The first projects were completed to the satisfaction of our Indian customers.
Paul Weckenmann and his wife Elfriede founded a small smithy in Dormettingen and opened its doors on 1 January 1957. 60 years later, Weckenmann machines and plants are held in high regard worldwide. A success story with its roots in the south-western Swabia region of Germany!

The fact that such 'great machines' are produced in Dormettingen surprised a customer from Mexico who came to visit us at Weckenmann a few years ago. And let’s face it, with around 1,100 inhabitants, Dormettingen in the Zollernalb district is not exactly the centre of the world.

However, this was no reason for Paul Weckenmann not to open his blacksmith’s workshop with his wife Elfriede in January 1957. At the beginning, both of them earned their keep with metalwork and the selling of agricultural machinery. The production of formwork and machinery for the production of concrete floor beams was started after only a few years. One of the first customers was a manufacturer of precast concrete parts in neighbouring Dotternhausen. About 8 years after founding the company, in 1965, the young company already supplied the first plants for the production of precast concrete parts to other customers in the region.

Inventiveness in the corporate DNA

28 years ago, the two today’s company owner Hermann and Wolfgang Weckenmann took over the company and the generation change succeeded. Together with its two sister companies, Weckenmann GmbH & Co. KG in Staffurt and Weckenmann Engineering (India) Private Limited in India, Weckenmann Anlagentechnik GmbH & Co. KG in Dormettingen is one of the most innovative and, therefore, leading companies in the industry. They employ a total of 155 employees at three locations. The company has production sites, as well as administrative and technology centres, in Dormettingen and Staffurt. In India, it has a sales office and a technological support centre.

Looking at the list of technical innovations, you get the strong impression that the persistent search for new solutions is part of the DNA of this family business. This led to the first concrete spreader for Omnia large-area slabs being manufactured in series by Weckenmann. The first 1:1 large-scale plotter for precast concrete plants was a pioneering Weckenmann invention and a giant step towards CAD-CAM automation. The first shuttering robot for the automated handling of shuttering profiles clocked in for work in 1992. To this day, a speciality of Weckenmann!

Future-proof through technical progress

Three abbreviations stand out when you ask about the technical highlights of the most recent company history: MagVib, WAvision and MBM. “MagVib” stands for magnetically fixed vibrators and is technology used to compact fresh concrete. Magnets are used to clamp high-frequency vibrators to the shuttering pallets. “WAvision” is Weckenmann’s modular control system for automated precast concrete production. All data in the company, from preparation to production, are used and processed to control the plant in the WAvision system.

Award-winning technology

Weckenmann received two prestigious awards for its latest innovation, the Mobile Battery Mould “MBM®”. It was awarded the Baden-Württemberg Innovation Prize in 2016 and the innovation prize of “bauma”, the most important construction machinery trade fair in the world. “This product enables the production of precast concrete parts in close proximity of the construction site on which the concrete parts are installed,” Hermann Weckenmann explains the advantages of the mobile battery mould.

Algorithms do not build machines

The company now sees itself as a full-service supplier for turnkey plants – from the shuttering profile to the IT control system. Plants on which concrete parts are produced. “The challenge for us as a medium-sized family business lies less in the global demand for precast concrete parts; this demand is large enough,” explains Wolfgang Weckenmann. “We are constantly faced with the task of finding motivated and qualified employees who fit in with us. Because despite all the technical progress, it is the people who advise our customers, develop our concepts and build our machines. If a malfunction or fault occurs in a plant, which happens rarely enough, it is not the algorithm that helps the user out of trouble, but the Weckenmann service technician, who is always available.”

The employees and the management decided to celebrate the 60-year company anniversary with a common excursion. Thus, about 80 employees experienced an entertaining trip to Lake Constance by water and land. In this way, with magnificent mood, memories could be shared and new impressions were gained.
Optimising production processes at the Gunzenhausen site

Lithonplus: Upgrade of the casting mould for L-panel production

Lithonplus Steinmanufaktur is a subsidiary of HeidelbergCement AG and Schwenk KG and specialises in the production of high-quality concrete products in Germany. Lithonplus Steinmanufaktur produces high-quality concrete products for the design of paths, gardens and driveways at 16 sites situated in different parts of the country.

L-panel production was also optimised as part of the restructuring of the factory at the Gunzenhausen plant in Franconia. High-quality L-panels in fair faced concrete quality are produced here in different sizes.

Production is synchronised and takes place on cutting-edge movable single and multiple moulds. The possibility to move the moulds on the track rails allows the division of labour to be applied to the organisation of production. Weckenmann’s brief was to optimise the transport logistics in production by designing a motorised, movable transversal shifting unit to relocate the L-panel moulds to different production areas. Another task was to improve the pouring and the transportation of the concrete.

A transversal travel area was designed in the production hall. This allows the use of a cross lifting truck with the least possible height offset. This serves as a mobile switch point and connects the individual track sections to each other.

As the moulds to be moved are not equipped with their own drives, the moulds are pulled onto the trolley by means of a cross slide and pushed back onto the longitudinal track after the relocation has been carried out. This action is controlled manually.

The concrete at the Gunzenhausen plant is supplied by a bucket conveyor. A concrete spreader, which buffers the SVB concrete and transports it to the concreting station, was installed for the batchwise transfer of concrete and the filling of the moulds.

With a cross-travel range of almost 28 m, the concrete spreader can be used in various concreting positions in the hall. All motorised functions are controlled by radio.

“Following a short assembly time, the plant components were successfully installed and commissioned by the Weckenmann technicians and have since been indispensable plant components in the production at the Lithonplus site in Gunzenhausen,” confirmed Mr. Klaus Pfenninger / Plant Manager at Lithonplus Gunzenhausen.

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38-year-old Roman Ivanov has been in charge of the CIS states for Weckenmann since mid-June 2017.

He was born in Kazakhstan, grew up in Moscow, and worked successfully as a project manager in the Russian capital for various companies after studying industrial engineering, finance and business. He speaks German, English, Russian and a little Kazakh, and he has a wealth of experience in the sale and distribution of machines and equipment on the Russian market. His cultural and professional background has quickly made our new colleague a sought-after point of contact for our customers in Russia and the CIS countries.