

Weckenmann Anlagentechnik GmbH+Co.KG, 72358 Dormettingen, Germany

Precast concrete company ABI implements a sophisticated retrofit project and increases the productivity of its plant

In the course of plant modernisation at the Bedburg/Erft location, Andernacher Bimswerk GmbH & Co.KG (ABI) and mechanical engineers Weckenmann Anlagentechnik GmbH & Co.KG achieved a productivity increase of 15% in the automated setup of formwork pallets.

Precast concrete company Andernacher Bimswerk GmbH & Co.KG (ABI) produces precast slabs with in-situ topping, double walls and solid slabs for industrial and private buildings at three locations in Germany for the German and European market. ABI operates an efficient circulation plant at the Bedburg plant in the Rhein-Erft district northwest of Cologne and 40 minutes by car from that city. The family business, established in 1950, has also enjoyed an excellent reputation for many years, even beyond Germany's borders. Thus, for example, the British architect Sir Norman Foster used 12,000 m² of ABI Syspropart precast slabs with in-situ topping in fair-faced concrete for the contemporary "Gauge" residential complex in Manchester.

"ABI's excellent reputation as a reliable supplier of precast concrete elements is no accident", says Dietmar Kiene, sales director at the Swabian mechanical and plant engineering firm of Weckenmann Anlagentechnik GmbH & Co.KG in Dormettingen. "Because the management of ABI is constantly

in search of new opportunities to further improve the quality and profitability of its plants." Dietmar Kiene should know, because ABI has been "a demanding Weckenmann customer" for over thirty years, according to the sales director. Many of the facilities and systems that ABI uses to produce precast concrete elements in two-shift operation at the Bedburg plant bear the blue Weckenmann logo of the mechanical engineers from Dormettingen. This also applies to the new fully-automatic magazine robot and new transport roller conveyors that the specialists from Weckenmann implemented a few weeks ago as part of a retrofit project at ABI in Bedburg.

Experts for new systems and retrofits

But Weckenmann is more than just an ABI contact for new precast concrete element manufacturing systems. ABI also knows about the Swabian mechanical engineer's capabilities and years of retrofit experience; i.e. plant modernisation. "Reduction of unit costs, shortening of cycle time, quality improvement, increased flexibility: the manufacturers of precast concrete elements and mechanical engineers are faced with the same challenges", says CEO Hermann Weckenmann. "Our customers can meet these challenges with either installation of a completely new production plant or targeted and sophisticated modernisation. Based on our experience, we



Before retrofit project: Formwork plant at ABI Bedburg



After modernisation: Formwork plant with new cycling roller conveyor and new Weckenmann magazine robot

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duction of precast concrete elements
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The new magazine robot with the expanded magazine and new cycling roller conveyors



The formworks from the magazine are fed to the formwork robot on new roller conveyors.

know that strategic modernisation is often more cost-effective for the customer than a new plant." Weckenmann has regularly advised ABI for years on modernisation projects, which have included installation of new formwork pallets, lifting equipment, formwork systems and magnetic clamps. ABI values the experience and technical know-how of the Swabian mechanical engineer, which has developed formwork and magazine robots for the precast concrete element manufacturing since 1992.

Cycle time down, output up

In the present retrofit project, the specification from ABI Bedburg called for a reduction of cycle time and thus an increase in output from the precast slab with in-situ topping and double wall production plant. The existing forming area of the pallet circulation plant consisted of two parallel formwork pallets, one formwork robot, a cross conveyor and a magazine for the

formworks. The existing formwork robot was not only responsible for setting up both formwork tables, but also stored and retrieved the formworks. Following a detailed on-site analysis, it was clear that an appreciable productivity increase could only be achieved if the existing formwork robot was completely freed from its magazine tasks. The formworks from the magazine would be delivered to the formwork robot on newly-installed roller conveyors between both of the forming locations to provide the robot with additional relief. As always with retrofit projects, this measure also had to have minimal effect on day-to-day work.

ABI and Weckenmann: a team

After the project was awarded to Weckenmann's retrofit experts for their concept, detailed development and precise scheduling of all activities began. Dietmar Kiene described the cooperation between the ABI and Weckenmann teams as

New Weckenmann website uses responsive web design

Weckenmann Anlagentechnik GmbH & Co.KG in Swabia's Dormettingen has activated its redesigned internet presence at www.weckenmann.com. The manufacturer of systems for precast concrete element production says that this is in response to changes in usage behaviour by internet users. "The conversion of our website to responsive web design accommodates changed surfing behaviour", says CEO Wolfgang Weckenmann. "We are active internationally with a very high proportion of exports and have determined that the number of people who use a mobile device to access the Internet is constantly growing."

A wide range of clearly structured information in multiple languages

The new website offers a very large amount of sound information with images and text about Weckenmann's entire range of products and services. The Swabian mechanical engineer's plants are found on every continent. This also explains why the new homepage is available in German, English, French, Spanish, Portuguese and Russian. Additional languages may be added.

The new Weckenmann page functions equally well on a tablet, smart phone or stationary PC with 27 inch screen. "Responsive" is the term web designers use for a web site that automatically adjusts to each user's screen. "We want the content-related, visual and technical modernisation of our Internet presence to show that we not only develop innovative machines and software, but are also up-to-date in terms of information and dialogue", says Wolfgang Weckenmann.

exceptionally good and constructive. "Everything must be just right, especially if the customer takes over work within a retrofit project", says Dietmar Kiene. "This simply worked out really well, personally and technically!"

Assembly in only one week

Construction and commissioning of the modernised plant at ABI in Bedburg was executed with the same efficiency as the conception, design and construction of the new components in Dormettingen. In only one week - over the Easter holidays - the old components were dismantled and the new systems were installed by a smoothly functioning ABI/Weckenmann team of technicians, fitters, supervisors and machine operators. ABI was able to put into operation the modernised plant again after a seven-day conversion time. Meanwhile, ABI once again produces precast slabs with in-situ topping and double walls with the plant in three-shift operation. "The plant runs perfectly", says Ulf Schumbrink, head of service and maintenance at ABI. "The magazine robot is really fast and now our formwork robot only deals with shuttering and plotting."

Productivity increase achieved

The modernised plant has proven itself in day-to-day production and ABI forecasts a production increase of approx. 15%. "But we also expect that a couple of percent will be added when everything is perfectly in tune", says Weckenmann sales director Dietmar Kiene. ■

FURTHER INFORMATION



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