Teka Maschinenbau GmbH, 67480 Edenkoben, Germany

# Ehl Group modernises plant in Kretz with two new facing concrete mixers

In the past 40 years Ehl AG has developed into a production and distribution network for high-quality and durable concrete block products for landscaping covering the whole of Germany. With around 1,000 employees in 28 locations, Ehl is always close to the customer and places the emphasis on advice, quality and ability to deliver. In the Ehl Group the emphasis is always on continuous improvements in the quality of the products. In order to be able to offer the customer maximum quality at all times, Ehl regularly invests in modernisation measures so that all Ehl plants always meet the company's high demands. One example of this is the recent modernisation of the concrete plant in Kretz. Sophisticated mixing technology is used because the customers and thus the products are also becoming more and more sophisticated. After all, the ever finer facing concretes have to be well processed accordingly. Ehl AG therefore decided to replace the existing facing concrete mixer at the Kretz plant by two Teka THT E-1-III high performance turbine mixers for high-quality facing concretes. Turbine mixers of this type of have already proven themselves in other plants to the entire satisfaction of the company.

Mark Küppers, CPI worldwide, Germany

#### Much has happened in 40 years

The civil engineer Bernhard Ehl became self-employed in 1976 and founded the company Ehl-Beton in Kruft near Andernach, taking over a disused pumice factory in the process. From the outset he focused on developing his own, innovative products. Ehl founded the first branch in Neu-Bamberg near Bad Kreuznach in 1983. This was the first step towards building a nationwide production and logistics network.

Following the reunification of Germany, Ehl got involved with the first investors in the

new federal states and put the first plant into operation in 1990 in Dessau. Further plants were built in the years that followed.

Ehl GmbH became Ehl AG in 1998. This step set the course for securing the company's future in the long-term. Two years later the subsidiary Ehl Polska Sp.z o.o. was founded in Legnica in Poland and the first Ehl plant outside Germany was built.

In May 2002 Ehl AG became an independently-run subsidiary of the Irish CRH Group. CRH plc, which is headquartered in Dublin, operates in more than 3,500 locations in 35 countries and, with over 76,000 employees, is one of the world's leading companies in the building materials industrial.

#### Kretz site

The Kretz site is equipped with a Masa concrete block line and a concrete block line by Schlosser-Pfeiffer, on which virtually the entire range of products from the areas of concrete pavers and slabs, as well as numerous pumice products such as planting rings are manufactured.

Ehl offers a product range from simple to high class. Many products are further refined and coated in later steps.

An ageing unit creates an antique appearance of some products, because aged concrete products are very popular with many customers.



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Ehl plant in Kretz

#### CONCRETE PRODUCTS & CAST STONE



The two Teka THT E-1-III high performance turbine mixers for high-quality facing concretes.

Furthermore, retaining walls are manufactured at the Kretz plant. One of the requirements for the new concrete mixer was therefore for the entire spectrum to be covered, so that the corresponding concretes can be manufactured for the respective requirements.

#### Two facing concrete mixers also bring more flexibility

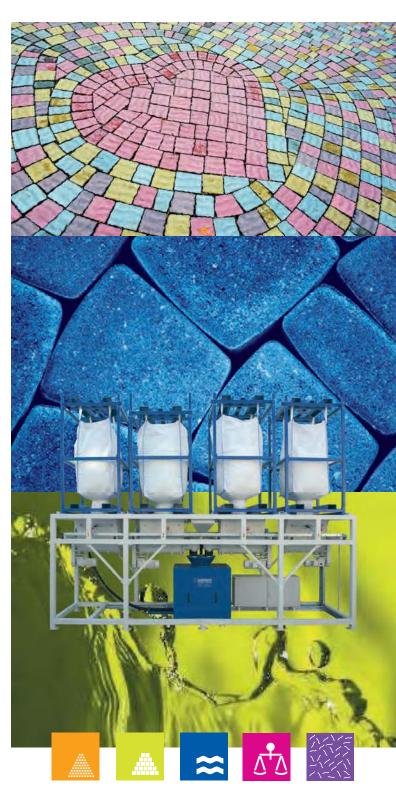
The two production lines running at the Kretz plant are supplied with concrete via flying buckets from the mixing centre positioned in the middle of the hall. Two Teka ring pan mixers, one for each line, produce the core concrete. Positioned between the two core concrete mixers was a facing concrete mixer, also from Teka, which has provided both production lines with facing concrete until now. Although that worked fine in normal production, it was here that the potential bottleneck of the entire production was to be found. Since the mixer controller was also getting rather long in the tooth, Ehl decided to fundamentally modernise the mixing centre.



Teka installed two skip hoists (500 litres) in a bottom discharge design to complement the two new facing concrete mixers.

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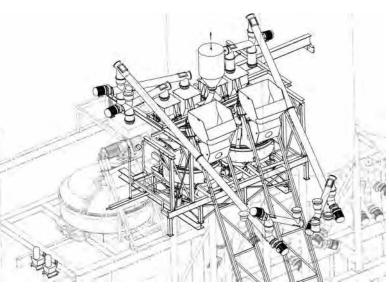
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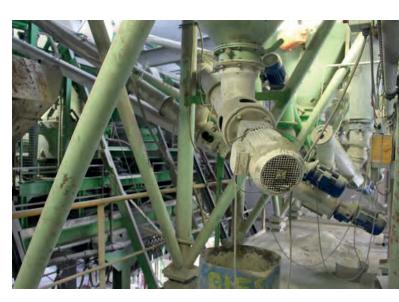
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The biggest challenge was to integrate the two mixers into the existing mixing plant. The two new facing concrete mixers had to be installed between the existing core concrete mixers.



The available space was utilised to the optimum.

The main measure of the modernisation was the replacement of the single facing concrete mixer by two new facing concrete mixers, so that each line now has its own dedicated facing concrete mixer. It was no surprise that Teka was selected to supply the two new mixers – the close ties between Ehl and Teka are of an almost historical nature. That's how Ehl's technical director Andreas Schlemmer describes the long-standing good partnership between the two companies. Ehl was therefore also involved in the development of Teka's high perform-

ance turbine mixer, since numerous trials of this type of mixer were undertaken in the Ehl plants. A total of almost 15 Teka turbine mixers in different versions are in use today in the EHL plants.

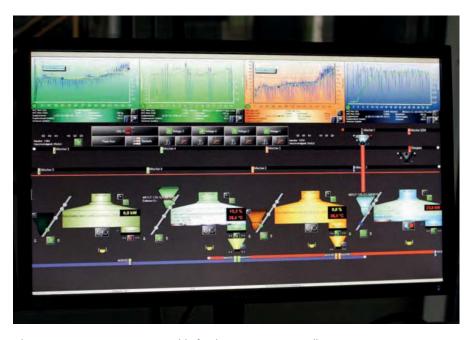
The Sauter company was responsible for the new mixer controller, which completely replaced the old controller and brought the system right up to date. The concrete production for the two lines no longer overlaps. Both facilities are now provided with facing and core concrete by their own flying buckets, independently of each other. Sauter has already installed numerous controllers at Ehl and is praised for its adherence to schedules.

#### The biggest challenge was space

The biggest challenge in this particular project was to integrate the two mixers into the existing mixing plant. The two new facing concrete mixers had to be installed between the existing core concrete mixers. The spatial conditions weren't ideal for this,



Like the core concrete mixers, the new high performance turbine mixers discharge directly into one of the two flying buckets.



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since the available space had only had to accommodate a single mixer until now.

Therefore, Teka placed the two new mixers on an additionally installed mixer platform that was constructed between the existing mixer platform and the binding agent silo platform.

A further requirement was that the mixers should operate autonomously. This meant that separate feeders and binding agent scales had to be integrated for each mixer. The scales, with a dual chamber design, weigh white and grey cement separately from each other, which enables sensitive handling.

#### Teka high-performance turbine mixer

The Teka THT high-performance turbine mixers were presented for the first time at the bauma 2013 and have established themselves in many concrete plants for the production of high-quality products. The THT turbine mixer is mainly used there for facing, coloured, fibre reinforced and polymer concretes as well as for self-compacting and ultra-high-performance concrete.

The mixer versions selected by Ehl in Kretz have somewhat bigger troughs than those for standard applications. The 30 kW drive used here is also more powerful. It is therefore no problem to mix a filling quantity of 600 l material, equivalent to a hardened concrete output of 0.4 m³. The drive speeds can be infinitely adapted to the production process by means of frequency converters.

A further important decision-making criterion was, of course, the fact that the Teka turbine mixer is characterised by its intensive mixing in a very short period of time, which it demonstrates every day in numerous Ehl plants. The great variability in the size of the mixture was another reason to opt for this mixer. The mixture size can be easily adjusted here from a minimum of 60 litres up to a maximum of 600 litres.

Since the patented mixing turbine takes care of all main functions, such as intensive mixing and complete discharge in a short time, only a few tools such as scrapers are used. Their purpose is to further minimise soiling which is already low due to the reduction of all contact areas.

The cleaning times at Ehl are thus pleasantly short, even after long periods of operation. This point is very important, especially in cases where there are frequent changes of product and colour. Furthermore, this concept reduces wear and consequentially the requirement for wearing parts – and thus ultimately the service and maintenance costs.

"Another advantage is the similarity of the Teka mixers. That makes the stocking of spare parts manageable", says Andreas Schlemmer, pointing out a further convincing point of the Teka construction kit system.

#### Technical data and special features of the THT type E-1-III highperformance turbine mixer

- Max. filling quantity 600 litres / 900 ka
- 0.4 m³ hardened concrete output per batch
- Mixer drive power: 30 kW
- Trough diameter: 1800 mm
- Water distribution with nozzle system for fresh water with nonreturn valve
- · Mixing star with patented mixing turbine



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Two concrete block lines run at the Kretz site, on which virtually the complete product range from the areas of concrete paving stones and slabs as well as numerous pumice products are manufactured.



Ehl offers a product range from simple to high class. Many products are further refined and coated in later steps.





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- Clearing arm with blade made of chill casting, with scraper blade made of chill casting
- Hydraulically actuated discharge via rotary piston cylinder
- Separate, motor-driven hydraulic power unit
- Attached solenoid valve for actuation of the segment-shaped discharge push-

Teka installed two skip hoists (500 litres) in a bottom discharge design to complement the two new facing concrete mixers.

#### Looking to the future with confidence

Ehl is adapting its production facilities to suit the changing requirements in accordance with the changing consumption behaviour of its customers. Ehl is equipped for the future and can look positively to the future as a market leader in the industry.

With the new mixing equipment, the desired concrete for the entire product range can be manufactured in the Kretz plant quickly, in very high quality and in a wide range of colours. The goal is to produce concrete products that delight people

- in keeping with Ehl's slogan "Stones for life". That means products that permanently convince through their design, quality and durability.

At the start of its anniversary year in 2016, Ehl AG, which is now 40 years old, also presented a completely revised brand appearance and in doing so has not only modernised its production plants, but is also banking on a fresh, modern marketing. In the development of the new logo, importance was attached to conveying the company's core competence via the logo namely the development and manufacturing of concrete products.

Watch a video about the concrete plant in Kretz: www.cpi-worldwide.com/cpi-tv/category/103/46883 Simply scan the QR code with your smart phone and watch the video!

FURTHER INFORMATION



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