

Kobra Formen GmbH, 08485 Lengenfeld, Germany

## 20 years of quality and innovation

Kobra Formen GmbH from Lengenfeld celebrated the 20th anniversary of its founding on 18 March 2011 and, to mark the event, the company organised an in-house exhibition with the theme '20 years of quality and innovation'. Over those twenty years the Lengenfeld site has been continually extended and has developed into the base of an international group of companies with modern production plants and an export quota of 70%. Today Kobra employs around 340 people at 10 locations. With maximum customer orientation and trailblazing innovations, the company continually sets new milestones as a reliable supplier to the concrete block industry and can claim today to be a technological market leader in mould construction. In January 2011 Kobra was inducted into the 'Lexicon of German Market Leaders' with a two-page entry. This entry recognises the entrepreneurial performances and products of German companies that have successfully established themselves on the global market with inventiveness, creativity, flexibility and expertise in problem solving.



The managing partners, Joerg Rasbieler and Holger Stichel, recognise the entrepreneurial performance of Kobra founder Rudolf Braungardt.



Kobra presented various mould technologies in the workshops.

Apart from local politicians and representatives from trade associations, customers, suppliers and long-standing business partners, the ceremony was attended by the Minister of Finance of the State of Saxony, Prof. Dr. Georg Unland. Wilfried Polle, ma-

naging director of Lithonplus GmbH & Co. KG, illuminated in impressive fashion the close cooperation with Kobra from a customer's point of view. 20 years ago, Kobra went off the beaten track of the established mould manufacturers with innovative pro-

ducts. The fitting accuracy and service lives of the moulds quickly led to a significant improvement in the quality of the products in the concrete works. With the introduction of the more stable moulds from Kobra, the standard of evaluation for mould procure-



Joerg Schuenemann shows the quality of concrete paving stones originating from heatable moulds from Kobra.



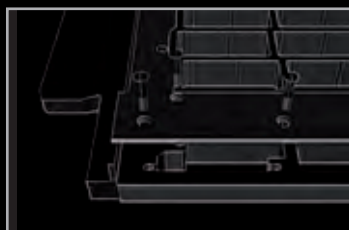
Service Manager Dietrich Langer describes the 5-point vibration measurement »Dynamic View™« and high-speed video recordings.



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KOBRA »Longlife™« MOULDS IN NEW  
STANDARD HARDNESS QUALITY 68 HRC.



FEATURE   
Longlife™

#### Our understanding of durable hardness:

- In KOBRA »Longlife™« moulds, the critical wearing areas are protected by additional cavities between the insert layout and weld-on frame parts to achieve optimal hardness properties. In the entire mould bottom, no welding seam is weakening the hardness of the mould insert.
- Compared to conventional concrete block moulds, our moulds are designed for optimal standard hardness quality »carbo 68 plus™« to significantly extend service life and reduce cavity wear.
- Tempered and bolted high quality wear plates cleanly and exactly match the top edge of the mould insert to improve the reconditioning of bolted and welded frame variants of each KOBRA paver mould.

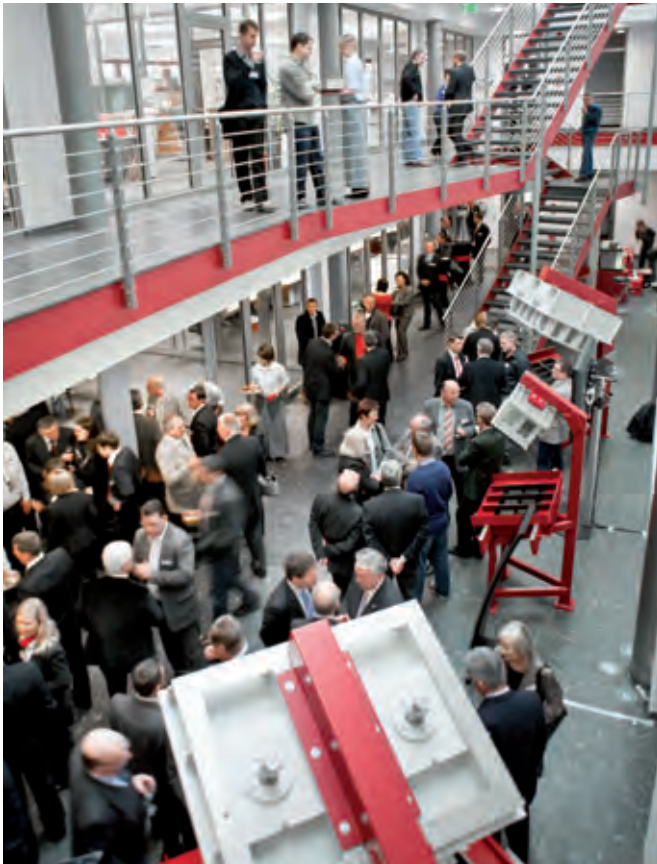


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The in-house exhibition on the occasion of the anniversary enabled around 270 guests to gain a deep insight into the work of Kobra Formen GmbH.

ment had to be reformed, among other things. Due to the improved wear behaviour, the key figure 'mould costs per production cycle' immediately became decisive for the purchase of moulds. Lithonplus considers the terms innovation, quality and flexibility to be closely connected with Kobra. In closing, Polle also stressed the future requirement of his company for wear-resistant standard moulds as well as moulds for small or defined production lots for special parts and commercial property business.

In guided tours of the works during running production, the guests and professional visitors were able to get an impression of the precision with which Kobra moulds for concrete works are manufactured. A varied programme of technical lectures provided information on new technological standards for paving stone and hollow block moulds. Kobra is considered to be an innovative problem solver. On the basis of various special moulds and individual product solutions, it became clear that there are virtually no more limits in the design of modern concrete block moulds, except for the vertical demoulding direction. In addition, the following technical highlights were presented:

- mechanical, double-acting tamper head constructions for covered spacers and dummy joints for better intermediate cleaning of the tamper shoes
- hydraulic drawing plate and sliding base moulds for products that are profiled on the underside or difficult to compact
- moulds with mechanical core lifter to reduce the adhesive surface area when demoulding compact masonry blocks
- double-acting tamper heads with pneumatic tamper compensation for better compaction of mixed product layouts on the board
- moulds with mechanically centred tamper heads for a clean

chamfer pattern in the case of large-format concrete products as well as the avoidance of grey marks in the case of white cement products.

As part of the in-house exhibition, numerous types of concrete block moulds were exhibited on the works site. Apart from the new »Longlife™« paving stone moulds, further highlights were moulds with heatable and rubber-supported tamper shoes. With the change of technology from conventional heating elements to order-specific heating mats for the tamper heating, the combination with flexible mounted tamper shoes has already been possible in slab moulds since 2008. The main advantage of the new heating system is its insensitivity to vibrations. Outstanding concrete block qualities can be achieved by the combination of the classic »Hotshoe™« demoulding aid with the »Flexshoe™« compaction support. The heating mats are worked into special sandwich elements, which Kobra designs to suit the tough production conditions in the concrete works and carefully end-assembles in its own manufacturing facility. The optimal temperature range of the shoe heating is individually adjustable using a controller and is kept constant by means of heat sensors.

During the compaction process, tamper shoes with flexible mountings enable a material flow in the stone cavities of moulds for large-format products and products that are difficult to compact. Above all, even stone heights can be produced with the aid of rubber bearings and mechanical stops. In addition, feedback from practical use in concrete works has already confirmed many times over that the shoes of mould tamper heads equipped with so-called rubber-bonded metals lie closer and more steadily on the filling material during compaction. In this way, very smooth and visually perfect surfaces can be achieved on the concrete product, especially if appropriate facing concretes are used.

High-speed video recordings, which Kobra make in the concrete works on request, were also on show at the in-house exhibition. Video sequences are created at 1,000 frames per second that allow the block making sequence to be shown at a considerably slower speed. The actual movement of the mould in the machine thereby becomes visible. Details that are barely perceptible to the human eye, but are extremely negative for the manufacturing process, supply findings that not only benefit the lifetime of the mould, but also help reduce maintenance and spare part costs for the machine. In particular, the plunge of the tamper shoes into the cavity of the mould for compaction, the behaviour of the mould and production board during compaction and the demoulding process are observed. This service is primarily aimed at the lowering of the mould costs per production cycle and has met with great interest in Germany and the USA. Kobra recommends high-speed investigations in particular if moulds show an unusual wear pattern or if the stone quality does not meet the customer's expectations. ■

#### FURTHER INFORMATION



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