# **The tines make the difference: Extra robust heavy-duty**

**lift truck for the concrete works of Wöhrl Ziegel & Fertigteile**

**Konecranes designs sensitive and robust heavy-duty lift truck for the concrete experts Wöhrl Ziegel & Fertigteile in Berghaselbach, Germany**

**Concrete looks uniformly grey – but is very diverse. At the construction site, it is either used in liquid form or delivered as a finished element. Wöhrl Ziegel & Fertigteile produces precast concrete and brick elements up to 9 meters long with a stacking weight of up to 16 tons. After manufacturing, the elements are transported to the external warehouse and to transport trucks on double-T beams. To ensure that they survive their journey without damage, they need a particularly sensitive and robust heavy-duty lift truck that can transport large and small loads safely, even in dusty environments. Konecranes has designed a heavy-duty lift truck that is a precise match for these challenging conditions.**

Concrete is used for construction – on a large scale. The mixture of gravel, sand, cement and water is popular. It stores heat, is fire-resistant and offers great design freedom. According to the Association of German Cement Works, around 52 million cubic meters of ready-mix concrete were produced in Germany in 2017. In addition to this liquid variant, which is transported to the construction site in a concrete mixer, the flexible building material can also be produced as a precast element in the plant and then installed. Precast elements are particularly suitable for efficient and fast house construction. In 2017, more than 9 million square meters of wall panels and 30 million square meters of ceiling panels were produced this way. At Wöhrl Ziegel & Fertigteile, the finished stacked packages weighing up to 16 tons must be transported from production to the external warehouse and onto transport trucks without any damage. For this purpose, Konecranes has designed a particularly sensitive heavy-duty lift truck with robust hydraulics.

**Heavy duty lift truck with flexible fork**

Wöhrl Ziegelwerk-Deckensysteme GmbH manufactures ceiling elements, balconies and special components for a wide range of applications in Berghaselbach near Freising, Bavaria. The family-owned company with 170 years of experience offers a portfolio of 100 different products – such as bricks in addition to concrete elements. A unique combination of products in Bavaria. The stacking packages weigh from 3 to 16 tons and can be up to 9 meters long. “To ensure our products arrive at the construction site undamaged, they must be transported carefully,” explains Thomas Wöhrl, Managing Director and owner of Wöhrl Ziegelwerk-Deckensysteme GmbH. “That's why we are putting them on a double T-beam.” The beams are then lifted by the heavy-duty lift truck and transported to their storage location. On the one hand, the lift truck has to be very robust because concrete dust from the works and the external warehouse is deposited on and in the hydraulic system. At the same time, sensitivity and flexibility are required: In order to fit optimally into the beams, the tines of the heavy-duty lift truck require a special shape. Thomas Wöhrl: “The fork must also be expandable so that the truck can safely pick up large parts.”

That’s why Konecranes has equipped the SMV 16-1200 C heavy-duty lift truck with a fork extension and tines with a special groove. “This means that the tines are a perfect match with the double-T beams,” says Uwe Höss, Sales Manager at Konecranes Lifttrucks Germany. “The fork can be extended to a width of up to 4 meters, and the tines can be moved individually to the left or right with hydraulics.” This allows the operator to pick up the double T-beams even when the approach is not at the perfect angle – with conventional forks, the lift truck has to reset and reposition. The new machine with a wheelbase of 3.75 meters lifts the precast element packages weighing up to 16 tons to a maximum height of 4 meters.

**Precise and durable machine**

“When large concrete elements are stacked high, the operator must keep an overview and be able to work precisely,” stresses Uwe Höss. “Thanks to a camera directly at the top of the mast, the operator can always see where the fork is directed, even at a height of four meters.” The truck is also equipped with an inching pedal. Uwe Höss: “When the operator steps on the brake, the traction drive is disconnected from the on-board hydraulics and full power is available to the hoisting system.” This allows the lift truck to maneuver safely with heavy loads.

In the concrete and brick plant of Wöhrl Ziegel & Fertigteile, the hydraulics of the heavy-duty lift truck must be particularly robust and withstand aggressive concrete dust. The solution from the Konecranes experts: A HLL (Hydraulic Longlife) microfilter system collects particles as small as 3 µm – more than four times as fine as normal filters. This significantly extends the oil change interval from 4,000 to up to 12,000 hours. This reduces the maintenance requirements and increases the operating time of the lift truck.

**Robust, safe and comfortable lifting of concrete elements**

The operators from Wöhrl Ziegel & Fertigteile also have long hours. With the Optima cab from Konecranes, they have a clear view and a pleasant working environment. The vibration- and noise-reduced cab is equipped with an air-suspended seat – the latest in ergonomics. A color screen also gives the operator a constant view of the mast and rear view camera images. “Here in Berghaselbach, all machines have to withstand harsh conditions and work safely,” says Thomas Wöhrl. “The heavy-duty lift truck with high-performance filter system specially designed for our requirements by Konecranes will certainly be operating in our concrete plant for a long time to come.”

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