

PRESS RELEASE

Weinsberg, 17 October 2018

Overhead surface treatment of 22 ton parts

Hot Furnaces, Cool Mechanical Handling

For its new factory, Benninghoven, specialists in the construction of asphalt mixing plants up to 50 m in height and a member of the Wirtgen Group, is investing in a new double-track suspension system from Vollert for the overhead surface treatment of large parts. The special drive concept allows the overhead and flexible transport of up to 22 ton heavy parts, while at the same time enabling the energy-efficient separation of transport and furnace steel structures. Besides Benninghoven, in the company group Wirtgen and Kleemann are already using the proven Vollert technology.

It was end of 2016 that the groundbreaking ceremony was held for the new headquarters of Benninghoven GmbH & Co. KG in Wittlich-Wengerohr. The project is the largest individual investment in the history of the Wirtgen Group with more than EUR 100 million and a logical consequence of the planned development of further international markets by Benninghoven. The growing demand can no longer be met with the current production capacity. The first asphalt mixing plants have been produced in the new plant since mid 2018.

Overhead despite heavy parts

With a view to the long-term growth perspective, the long-established company attaches great importance to state-of-the-art production systems and workplace ergonomics in technology and equipment. Vollert is responsible, as overall coordinator, for the planning and construction of a new large-part coating plant for the heavy parts up to 13 m long, 3.3 m wide and 22 tons of the asphalt mixing plants. They are transported overhead and fully automated by a double-track suspension system from the component pick-up to the priming, blasting, cleaning and coating. Lifting systems in the blasting, powder and painting cabinets ensure an ergonomic working height by lifting the large parts, while at the same the automated transport allows efficient throughput times of less than 60 minutes.

At Wirtgen in Windhagen and Kleemann in Göppingen two overhead coating systems of this type have been in operation since 2009. The new plant for Benninghoven benefits from the existing concepts: here a loading and unloading machine are also used to load the workpieces, individually or in batches into the goods carriers. After the preparation, the fully

automated journey begins through all further processing steps. A blasting cabin and a free-blasting plant, two powder cabinets and two coating furnaces are available for this purpose. The coating and drying technology is supplied by SLF from Greven-Reckenfeld, the wheel blasting machine comes from Wheelabrator from Metelen. A moveable distribution manipulator takes over the transport for more than 120 m along the entire length of the system to the parallel arranged workstations. At the end, this guides the parts, with temperatures up to 230 °C, to the cooling and buffering stations, before they are returned by the loading and unloading manipulator to several discharge stations in the production.

In order to be able to coat special parts, the loading and unloading manipulator, the preparation station, the distribution manipulator and the discharge stations are designed for parts up to 4 m wide. An automatic contour control detects the length and width of the workpieces with six laser scanners. In addition, oversized and heavy parts can be individually run in on transport vehicles and painted manually.

Flexible in Flow and Speed

The special feature of the Vollert system lies in the drive concept: instead of chain conveyors, stationary friction wheels and distribution manipulators ensure the feed rate of the goods carriers. This allows ceiling-mounted systems with a load capacity of up to 50 tons. The workpieces can be individually controlled - stop, eject, overtake and return are possible at any time. In addition, the operating speed of the machinery can be arbitrarily selected. At Benninghoven, the speed of the blasting cabin is not constant, but is adapted to the size and number of the workpieces. This provides for a fast operation and efficient use of the blasting agent. Only the carrier unit is located in the cabin. The suspended track and friction wheel is located outside and protected against blasting agent contamination. Due to a possible gap bridging of up to 50 cm, to prevent energy loss the steel structure of the 230 °C furnaces is also completely separated from the transport steel structure. Since the solution does not require single drives on the goods carriers no power supply is required in the coating cabins and furnaces - the optimum explosion protection.

About Vollert Anlagenbau GmbH

As specialists for heavy loads and large parts, Vollert Anlagenbau GmbH develops turnkey intralogistics concepts for the aluminum and metal industry. As a general contractor and full-service provider, the service range encompasses state-of-the-art material flow, storage and packaging technology as a stand-alone solution or integrated into a larger logistics environment.

Whether fully automated mega-high bay systems for aluminum coils, intelligent material flow systems for the leading aluminum extrusion press manufacturers, the world's most efficient stacker cranes for the storage of sheet metal plates, automatic crane systems for 50 tons and more or the most modern surface coating systems – Vollert is everywhere.

Vollert's plant and machine solutions are deployed in more than 80 countries around the world and in Asia and South America the company's own subsidiaries strengthen in addition the sales activities. Vollert employs more than 300 people at its company headquarters in Weinsberg. **www.vollert.de**

Press contact

Frank Brost

Senior Marketing Manager

Vollert Anlagenbau GmbH

Stadtseestr. 12

74189 Weinsberg/Germany

Phone: +49 7134 52 355

Fax: +49 7134 52 203

E-mail: frank.brost@vollert.de



Image 1



Image 2



Image 3



Image 4