

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

New precast plant erected in Denmark

The Danish companies ØSB, Svinninge Beton Industri, Byggebjerg Beton Industri and Abeo make up the group Industri Beton Holding A/S. The group produces precast concrete elements of all types for renovations, conversions or completely new projects. These include total deliveries of complete shell constructions, including design and assembly, as well as elements for plants, infrastructure, tanks and agriculture. In 2018 Svinninge Beton Industri decided to integrate a new plant in an existing building for the manufacture of precast concrete elements. Weckenmann Anlagentechnik GmbH & Co. KG developed a suitable concept for adapting the new plant to the conditions in the hall and was subsequently awarded the contract for the project.

Specific requirements

As it was not a greenfield project, several conditions in the hall had to be taken into account. On the one hand the clear-

ance height of the hall was very low and on the other the required pallet size was a whopping 4.5 x 13.0 metres. Svinninge Beton Industri plans to produce a wide range of solid elements and sandwich walls with this new plant, for which reason the pallets are designed for a maximum dead weight of 50 tonnes.

Svinninge Beton Industri produces exclusively individual elements, so they couldn't be integrated into a circulation plant. Weckenmann Anlagentechnik GmbH & Co. KG proposed the integration of a transfer table plant. This enables the fast transport of the pallets to the individual work stations, which are arranged offline without waiting times.

As a further advantage the transfer table has two platforms and can therefore transport two pallets at the same time. This has a positive effect on the utilisation planning and the fast conveying of the pallets. A concrete distributor with two buck-



Central transfer table with double platform



Weckenmann vibrating station and MagVib vibration technology

ets was installed in the precast plant, enabling the use of different sorts of concrete such as grey and coloured concrete. The power trowel employed ensures a high surface quality of the precast concrete elements produced. A large range of

surface effects can be achieved through the combination of smoothing trowel and smoothing disc.

The precast elements produced are transported via two tilting stations to separate outdoor areas.



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WAvision master computer supports planning

Svinninge Beton Industri uses the WAvision master computer from Weckenmann Anlagentechnik to support production planning. The WAvision master computer makes daily work easier for the plant user and assists him with mid-term planning. Its main function at Svinninge Beton Industri is production planning and control. The Webflow module enables essential information to be displayed on Smartphones, making it available anywhere and anytime. The maintenance department benefits from graphic support with error messages as well as planning software for the regularly recurring maintenance work.

Surface quality requires proper compaction

The most optimal possible compaction of concrete is of vital importance for the quality of a precast concrete element. In order for the precast element to have the required strength and other properties desired by the designer, the concrete must be mechanically compacted. The chosen procedure, whether high-frequency or low-frequency technology, depends on the consistency of the concrete used. Compaction at Svinninge Beton Industri is performed either via an oscillating shaking frame or using the MagVib vibration technology.

In the case of the MagVib vibration technology, vibrating plates are mounted on the underside of the formwork pallets. In the compaction station, the mounted external vibrators are non-positively docked on the vibrating plates by means of electromagnets. The high-frequency vibrators shake the formwork with specific vertical vibrations. In the MagVib technology, the so-called vibration energy has a short path to the precast concrete element and is distributed uniformly across the

pallet. Depending on concrete consistence, the speed can be continuously adjusted by means of inverters and vibration duration can be varied.

Further retrofits possible at any time

The new precast plant went into operation in summer 2018 and employs 50 people. 13 pallets were in use at the start. On account of the high utilisation rate following the commissioning of the plant, the company has invested in further pallets for the production of the precast concrete elements.

The plant has been planned by Weckenmann such that a plotter and an automatic pallet cleaner can easily be retrofitted. Furthermore the retrofitting of a curing chamber has been allowed for. Svinninge Beton Industri is thus ideally equipped for the further challenges of the future and the increases in capacity associated with that. ■

FURTHER INFORMATION



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