

■ Weckenmann, Vollert, Unitechnik and Prilhofer build plants for the construction of high quality villas

German consortium constructs world's largest precast concrete components factory in Thailand

The largest precast concrete element factory in the world has been constructed with the aid of Germany production technology in Bangkok, Thailand. Weckenmann Anlagentechnik, Vollert Anlagenbau and Unitechnik together with Christian

Prilhofer Consulting have created a team to realise this large-scale project. Growing demand for top quality villas on the Thai housing market can now be met with this new production plant.

The plant enables exact logistics of materials as well as the efficient processing of 830 tonnes of raw materials and manufactured articles daily – this amounts to a daily capacity of ten whole houses. In addition, concrete wall panels to the approx. amount of 110,000 sqm will be manufactured per month.

The new plant runs at high capacity without sacrificing the level of product quality. It also allows the manufacture of building components with alternating geometries. The production of eight different types of villa has been foreseen in the area of ramp-up services to date and further variations can follow smoothly as the architecture of the plant does not restrict the manufacture of a range of villa types. A total of 90 formwork palettes measuring

3.5 x 13.5 m were delivered by Weckenmann Anlagentechnik to the new plant. With the aid of a special large format plotter, the layout of the wall slabs can be drawn directly on the formwork palette on a 1:1 scale. This guarantees that various built-in parts and recesses for doors and windows are located in the correct places. The shaping of contours for the elements to be produced according to the drawn geometry.

parts is carried out by a modular formwork system with box sections. The box sections are secured to the formwork palettes with strong permanent magnets which hold the formwork profile in place during the complete production process. The filling of the formwork tables with fresh concrete is carried out by a precast

concrete spreader. The surfaces of the precast concrete components are smoothed automatically and all ready to paint and decorate.

The flow of material within the plant is carried out by a palette circulation system which transports the formwork palettes to the work station in a minute cycle – this guarantees flexible logistics in the production process. This circulation system was delivered together with high bay racking to dry the manufactured concrete elements by the plant engineer Vollert. A formwork palette filled with concrete can weigh up to 22 tonnes and therefore demands that the system is of a certain size. Unitechnik's central master computer supplies the work stations with manufacturing data and coordinates all the automatic



The spectacular hall dimensions are a tribute to the gigantic production capacity layout



About 110,000 square meters of wall elements can be produced per month in this new facility

processes in the production plant. The master computer monitors the storage period - oriented towards a building site - in the heated high bay racking, it also monitors the sequential removal of cured elements from stock. The wall panels are stripped the next day, immediately transported to the building site and assembled there.

"With this production plant, we are com-

binning the advantages of German machine engineering with all the possibilities of the Thai market", explained Hermann Weckenmann, Managing Director of Weckenmann Anlagentechnik. "The cooperation between leading technical plant manufacturers and a far-sighted investor sets an example worldwide when it comes to the building of similar plants." This new precast concrete components

factory ensures that the growing demand for top quality housing space with a high aesthetic value can nevertheless be met. Thanks to this, the plant operators at Preuksa Real Estate are to become the second largest real estate business in Thailand.

In one of the coming issues of CPI, the plant will be described in detail. ■

Further information:



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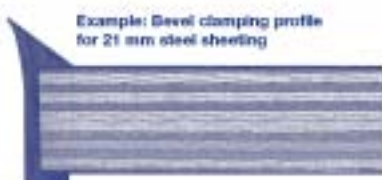
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Highly flexible, bevel-clamping profiles for steel sheeting and formwork plates

Bevel clamping profiles made from forming-oil resistant plastics in standard and heat-resistant grades for heated formworks. Can be used for 21 mm formwork panels and formwork plates from 5 to 8 mm. Special profiles for special requirements are available on enquiry. The outstanding sealing properties of these profiles due to their special shape and high, long-term flexibility reliably prevents the escape of concrete slop. The material is highly elastic and fracture proof and is designed for high-density formwork joints to improve the quality of precast concrete components.



Example: Bevel clamping profile for 21 mm steel sheeting

