

Prinzing GmbH, 89143 Blaubeuren, Germany

Innovative products at the bauma 2010

The Prinzing company from Blaubeuren in Germany can look back on a long company history and is hence exhibiting for the 29th time at the world's largest construction machine trade fair in Munich. Innovations await visitors and prospective customers that will fulfil their ideas and expectations, and with which the zeitgeist of the present and the future are compatible. This means that there is particular demand for sustainable developments that reduce energy requirements, improve conditions of work, optimise products, avoid the use of plastics and, in particular of course, considerably improve economy and hence competitiveness. Prinzing is in the fortunate position once again of being able to present such a genuine innovation to the professional public at the bauma, namely the Primuss milling robot, which mills channels and connections in manhole bottoms fully automatically.

The Primuss can be seen in action at the Prinzing booth, together with the associated manhole bottoms. In developing the Primuss, new ideas that encompass the following fields had to be found and realised:

Manufacturing and process technology

The manhole bottom blanks are produced without channels and connections with earth-moist concrete with a low water-cement ratio. After brief partial curing, the channels and connections are milled in one working step.

Concrete technology

The fine-grained concrete that has made this process possible at all results in particularly smooth surfaces and a very good overall appearance of the manhole bottom. The technology is suitable for all types of concrete (sulphate-resistant concrete, SCC, high performance concrete)

Machine and plant technology

The order-related production of the bottoms (each bottom a one-off) is automatic and program-controlled. Sources of error are excluded. The manhole bottoms are dimen-



Mistral with seal magazine

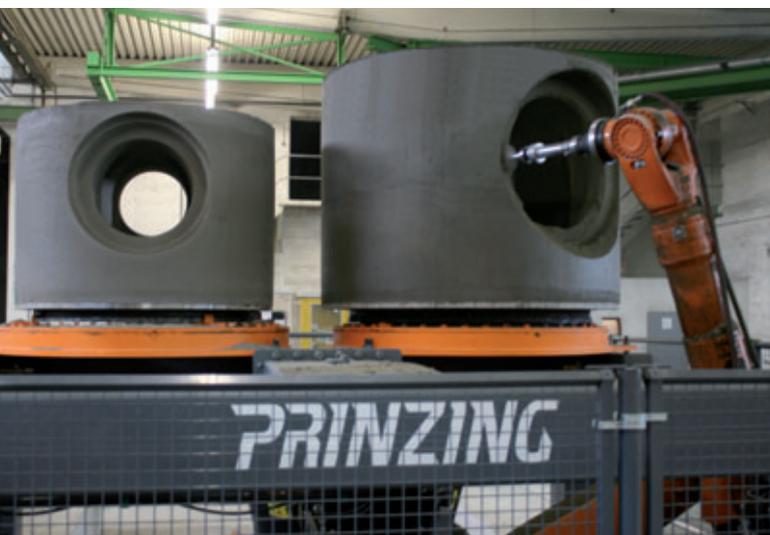
sionally very accurate and have a geometrically optimised form. All dimensions are documented and are comprehensible at all times.

Automation

The complete system is optimised for the specific customer. The new and innovative robot program works like an expert with legalities so that, after inputting the manhole parameters (e.g. connection diameter, gon, offset etc.), the optimum bottom comes out

at the end. There is great market and user potential. This is also shown by the fact that, after the shortest development time, the first plant was already successfully realised at the Ruf company in Wilburgstetten, Germany.

The economy of the innovation has already led to a large demand. Hence, two further Primuss plants are in production at Prinzing and contracts for three further plants have been concluded.



The Primuss mills variable channels and connections in manhole bottoms fully automatically



U-channels on the Blizzard



Tornado with anchor machine



Container manufacturing with integrated cover

There are also interesting innovations in the rest of Prinzing's range of machines

The Mistral and Pegasus pipe making plants are designed for all types of pipe, e.g. circular pipes, pipes with bases, egg-shaped profiles, steel reinforced pipes and joint pieces. The Mistral, as a combined plant, can also rationally produce the entire manhole range up to manhole pipes with an overall length of 3.0 m, or also manhole blanks for subsequent further processing with the Primuss. The use of integrated seals in pipes and manholes is increasing. Pulling the seals onto the base ring pallet is physically hard work for one to two men. Prinzing offers a newly developed seal magazine for this, which is integrated in the automatic process of the plants and which takes the seals from a magazine, automatically pulls them onto the base ring pallets and at the same time places the base ring pallets into the production machine (Mistral, Pegasus).

The Blizzard is a tilting table machine for the production of the most diverse concrete goods (sink traps, cable ducts, covers, support rings, manhole cover slabs etc.). Substantial improvements have been made here by introducing the latest vibration technology (speed and amplitude-controlled vibration) and optimisation of the mixture. Due to the versatility of the plant, new product ideas can often be realised with the Blizzard that were previously inaccessible to rational production. For instance, precast concrete parts are produced on the last delivered Blizzard for building construction (ventilation shafts, installation and utility shafts) and also for road construction (concrete step barriers).



Zelus for wet cast and dry cast method



Sirius stair formwork with fast adjustment

The Tornado manhole ring and pipe making machine has been built since 1977. Thanks to constant further development, this plant is at a very high level of development. Nevertheless a new development can be presented, namely the automatic feeding of ball head anchors from a magazine to the manufacturing machine. This anchor magazine is optimally integrated in the Tornado's automatic manufacturing process.

The Atlas building kit principle can be custom designed for the most diverse products and lot sizes. The range extends from small parts, such as U-channels and manholes, up to large pipes and large monolithic containers as well as covers. Thanks to a procedure newly developed by Prinzing, it is possible for the first time for containers and covers to be connected form-locked and force-locked during production. This leads to significantly improved product quality with an additional rationalisation effect.

Large elements, such as large-format slabs (up to 2000 x 2000 mm) or also precast

concrete parts for building construction (up to 2000 x 6000 mm), such as slatted floors and similar products, can be manufactured economically on the Zelus using both the wet cast and dry cast methods. As opposed to circulating plants, the Zelus offers a flexible alternative here.

Last but not least, it has also been possible to significantly improve the Prinzing Sirius stair formwork. Even for spiral staircases, all important parameters can be adjusted centrally and infinitely in the shortest space of time and the equipment is suitable for self-compacting concrete, so that very high quality, dimensionally accurate stairs can be produced.

The Prinzing team is looking forward to the bauma (Hall B1, Booth 115/214) and will be glad to take on the challenges and the suggestions of the prospective customers and the professional public. With the broadly diversified Prinzing range and common ideas, many goals can be implemented profitably and lastingly.

FURTHER INFORMATION

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