Prinzing GmbH: Innovation in stair technology

Automatically adjustable stair molds save on wages and supply top quality

Prinzing GmbH, in Blaubeuren, Germany, sees itself as a producer of innovative machines and molds with a worldwide reputation. A number of path-breaking development by the company in the sector of manhole rings and pipe production, for example direct vibration of rising elements, shafts with integrated seals and load transfer elements, or continuous adjustment of construction lengths in the rational production of shaft pipes and manhole bases, are counted as state-of-the-art today.

The new Sirius stair casting unit from Prinzing.

Inspired by the new opportunities opened up by self-compacting concrete, the people at Prinzing have been busy for some time with the development of methods and systems for the rational casting of high quality prefabricated concrete products. Last year contact was made with the German inventor Harald Schahl, who has been privately involved in the development of automatic stair molds for years and has a number of excellent ideas which he has not yet been able to put into practice. An intensive cooperation arose spontaneously from this contact. And the result is the first successfully implemented automatic stair mold from Prinzing. It is a real revolution in the production of straight prefabricated concrete stairs with adjustable molds (Figure 1).

The adjustment of the stair mold to another rise angle according to DIN 18065 is done using electric motors in only a few seconds (Figure 2), the desired rise angle only needs to be entered on the control console. The built-in PLC control from Siemens processes the values entered and automatically makes the adjustments for step depth and height.

Absolute value sensors mounted on the mold ensure the high degree of precision of the stairs (Figure 3). The

The conversion of the stair mold to another rise angle according to DIN18065 is accomplished in only a few seconds using electric motors.

thickness of the steps and the width of the staircase can quickly be adjusted continuously using guide rails (Figure 4). Another advantage is that the upper and lower landings can be can be cast in one process with the stairs, even for both landings simultaneously between steps 5 and 18, using the stair casting unit which is marketed under the name Sirius.

According to the manufacturer, the technical characteristics of this clever stair casting unit reduce the adjustment times to a minimum so that it is no problem to use it several times in one work shift. The upper surface of the stairs has good quality; the rear edges of the steps fulfill modern standards. The staircases thus fulfill every demand for quality and appearance.

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Extremely large radii or even undercutting because of the use of rubber profiles which results from the use of traditional molds is a thing of the past.

According to the company, the Sirius automatic stair casting unit from Prinzing sets new standards in the manufacture of prefabricated concrete stairs with reference to saving wage costs while simultaneously increasing quality and flexibility. It is therefore the ideal solution when manufacturers of prefabricated stairs need to compensate for increasing cost and deadline pressure.

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The lift anchors installed at the factory make transport easy and ensure rapid assembly at the construction site.

View of a stairway produced on a Sirius machine: excellent surfaces and quality down to the details characterize these precast concrete elements.

Further information:

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