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Innovations 2010 – Mechanical engineering at the highest possible level

The Hess Group will once again take advantage of bauma, the important hub taking place every three years and lynchpin of international mechanical engineering, to launch its latest product innovations. The company, which is located in Burbach, Siegerland (Germany), is ranked amongst the world market leaders for machines and plant for the concrete block industry. On an exhibition stand of more than 680 m², the Hess Group will display the most important novelties of its product portfolio. The company's stand will again form the meeting point for those professionals of the industry that are interested in gaining information about ground-breaking developments in the concrete block industry.

For the Hess Group, stagnation is an unknown word when it comes to development

In the field of concrete block machines, both the RH 760, an absolutely industrial novelty, and the RH 2000-3 will be put on display. The latter is a more advanced development of the Hess company's flagship, the RH 2000-2. This high-end machine was further optimised in cooperation with the sales, technical and service departments - plus end users - and fitted out with the latest technology. Particular emphasis was placed on the man / machine interface – technology that is easy to use and that lives up to the most recent safety requirements. The new highly dynamic hydraulics combined with an electronic axle controller are the core components of the RH 2000-3. The hydraulics are set up in a double circuit system with regulating pumps. The hydraulics loop control system used permits maximum performance to be attained with low power consumption.

With this machine, the imposed load movement is transferred by means of two cylinders acting as a hydraulic synchronisation system, thus ensuring both absolute positional accuracy and considerably improved synchronisation. Pressure sensors recognise and signal differences in filling levels inside the mould so that the operator can respond with the appropriate corrective measures. A closed loop hydraulic /electronic control circuit guarantees optimum imposed load positioning. The core and facing concrete filling carriages travel with absolute positional accuracy thanks to the direct highly dynamic control unit. An optimum position is also maintained whilst the filling grid is in motion. After all, a perfect filling makes for a very good product! One result of the improved hydraulic regulation with the RH 2000-3 is that further reductions in cycle times can be achieved. A notable additional effect is that mechanical construction components can be done away with, like an imposed load brake and height stops - features that have always entailed a great deal of maintenance work. Customers compare the RH 2000-3's behaviour with that of a machine tool.

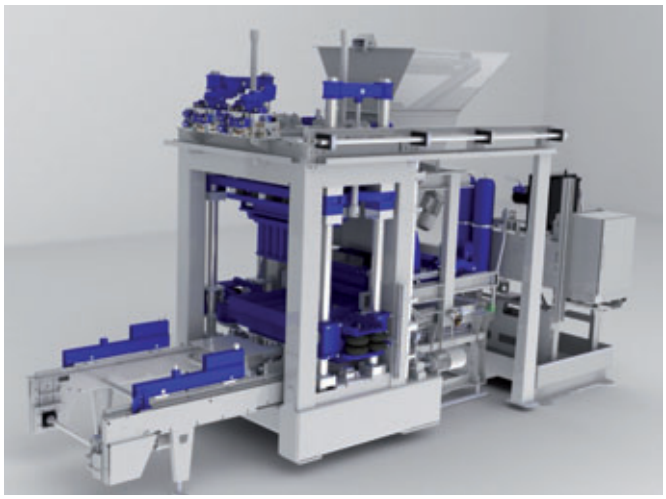
As an optional extra, the facing concrete filling device can be fitted with another Hess novelty – a smoothing roller for the filling carriage. With this innovation, an electrically chain-driven steel roller replaces the levelling frame on the front area of the filling carriage. Since this roller is equipped with a separate drive unit, the roller's peripheral speed can be regulated independently of the filling carriage speed. If the latter travels backwards, the roller smoothes the facing concrete layer by the difference in relative motion. If the roller rotates rapidly, then little will be spread; if the roller rotates slowly, then more will be the result. This avoids concrete being "chucked out" by the levelling frame of the filling carriage when it travels backwards. The process generates substantial benefits in paving block manufacturing, like, e.g., an appreciably more refined surface finish for large-sized products

That means that the surface allows less water penetration, thereby improving its resistance to frost. The filling procedure is simplified and accelerated as the mould can be filled without repeated movements of the filling carriage. Besides this, the smoothing roller enables production to be carried out with very moist concrete mixtures - resulting in significantly improved colour intensity and in turn leading to higher end product quality.

The new RH 2000-3 is equipped with an oil bath oscillation unit, a more advanced development of the well-proven Hess Variotronic System. With this new-type system, the vibration waves are stored in individual, self-contained housings that are filled with oil. This ensures that the bearings are lubricated constantly and running dry is impossible inside the housing as the oil also finds its way into areas that are otherwise difficult to access like, e.g., behind the bearings. A major advantage with this system when compared to conventional vibrator bearings is its increased operational life. Lubricant is being continuously supplied to the bearing in the oil bath and damage due to lack of lubrication can be ruled out. Time-consuming maintenance work can also be done away with.

At bauma 2010, HESS Maschinenfabrik will also exhibit its most recent development for the first time - the RH 760. Hess had already presented a machine specimen purely for block production at bauma 2004. Subsequent to the trade fair and exhaustive performance testing at their headquarters in Burbach, this development was successfully commissioned in exchange for an outmoded block maker. Due to great demand especially on the American market, the company's management decided to take up again on the idea of this machine concept concerning a pure block-making machine so as to "re-embrace" the block making market segment. One focus in this connection was on the practical implementation of the user friendliness both requested and required by customers. After a thorough analysis of the market and the creation of corresponding job specifications, the machine's design was overhauled, optimised and tailored to specific market conditions.

The result is the Hess Multimat RH 760 – a development not just suited for block manufacture, but for masonry and paving block production, too. The outer dimensions are geared to the size of competitors' machines so that there is no trouble in exchanging the RH 760 for other machines on previously existing foundations. On top of this, the machine is designed for a standard board size of 660 x 470 mm and it is possible to reutilise an existing pool of moulds by means of a special adapter. The RH 760 is fitted out as standard with the same well-proven hydraulics as in the RH 2000-3



Die neue Multimat RH 760 Steinformmaschine wird auf der bauma 2010 zu sehen sein.

thanks to the positive experience with the hydraulic closed loop control unit utilised in the latter. The machine is additionally equipped with the latest Hess Variotronic oil bath oscillation unit and can be supplied with metal sheets or with a core withdrawal device as an option. Mould changing can be carried out in the shortest of times by means of the manual or electric mould changing system.

However, this machine's real highlight is a cycle time of under 6 seconds – something that will be impressively demonstrated on the Hess Group exhibition stand at bauma (Hall B1, Stand 215/316). The company's subsidiaries, AAC, Schlosser-Pfeiffer and HMB, will also once again be present on this stand with their own innovations.

FURTHER INFORMATION

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