

Würschum GmbH, 73760 Ostfildern, Germany

New Granule Dosing System at Kreher Beton

Kreher Beton GmbH in Aschaffenburg is a reputable, high-quality concrete product manufacturer of tradition. In the middle of 2017, the company took the decision of adding a new cutting-edge Würschum colour dosing system to a rather outdated metering system for liquid colours. For Mr Theo Kreher, it was a matter of importance to change over to granule pigments with this new colour dosing system. "Considerable contamination frequently occurs during malfunctions with liquid metering. The consistency of liquid colour due to fluctuations in temperature and sedimentation is another reason for changing over to granules as well."

The requirements placed on the new granule system were high: additive dosing of eight basic colours, very great precision, cleanliness and frost protection. The Würschum system was able to fulfil all these specifications to the customer's complete satisfaction. The basic concept is that these eight base colours should be available in a row at the same time so that changing colour positions can be avoided. It also meant that the system was able to be installed in an optimum, space-saving way along a conveyor belt in a hall. This also created sufficient room for a forklift to be able to manoeuvre easily.

The system functions with a stationary weighing hopper into which all eight pneumatic vibration feeders can dose. This accelerates dosing cycles since no travelling times are neces-

sary. All connections are firmly joined and dust-free so that no dust can escape.

Precision up to +/-5 g

The vibration feeders can run at three speeds - coarse, fine and super-fine - with the purpose of functioning rapidly but very precisely as well. Quantities of pigment from 100 g up to 30 kg can be weighed with a precision of up to +/-5 g in the extremely accurate weighing hopper of this COM 70-1 granule unit. It can all take place without restrictions on the dosing speed of max. 1 kg per second, which means that big batches can also be weighed rapidly and precisely. Its maximum accuracy of +/-5g is particularly important with colour mixes to be able to maintain fine nuances with shades of yellow, for example. These pastel colours can also be mixed with shades of red and black according to customer wishes. This, again, is all controlled by recipe. The colour system's control unit was integrated into that of the Dorner mixing machine. Thanks to their many years of good cooperation with each other, Dorner and Würschum work seamlessly together in such cases.

Protection against frost

Protection against frost specified by the management at Kreher Beton is another of the system's special features. A frost monitor was integrated into the COM 70-1 dosing system and



Overview of the system with 8 colour positions in a row



COM 70-1 vibration feeders and precision weighing hopper

its housing insulated and sealed. The conveying hose was also thermally insulated to prevent condensation water forming through fluctuations in temperature.

The customer's requirements in respect of cleanliness had also been clearly defined. Instead of open big-bags, rigid

plastic containers are now utilised that can be easily closed and better sealed off with the system. Before these containers are lifted off after being emptied, the outlet is shut to prevent even the smallest amount from dribbling out.



Thermally insulated conveying hose



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COM 70-2 + MINI-COM



Filter cyclones above the concrete mixers

Two filter cyclones

The granule batch is conveyed pneumatically in two filter cyclones installed above both mixers. These cyclones also facilitate cleanliness as they filter off the conveying air. At the same time, a colour batch can be held in intermediate storage in the cyclones, should work with a mixer be delayed.

This system has put Kreher Beton GmbH from Aschaffenburg in a very good position for manufacturing high-class coloured concrete products of the future. Kreher's product designers now know practically no limits in implementing their ideas.

FURTHER INFORMATION

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As Theo Kreher, managing director and owner, puts it: "The Würschum system has lived up splendidly to all our requirements and we have been very happy with how the installation, commissioning and training turned out as well as with how the colour dosing system operates on a daily basis."