Kleemann │ Cone Crusher Proves Itself in the Production of Railway Ballast and High-Grade Chippings

A company near Berlin is using the cone crusher MOBICONE MCO 90i EVO2 from Kleemann for recycling and the production of crushed rock and high-grade chippings. Since summer 2021, the first plant of this type worldwide has been recycling mainly railway ballast. The screening plant MOBISCREEN MS 953 EVO operates downstream of the cone crusher.

High demands are placed on railway ballast because, in a high-quality ballast bed, the stones dig into one another with their sharp edges to form a stable base. The sharpness of the edges is therefore an essential quality criterion of the crushing procedure. Furthermore, only suitable material gives the track system the required elasticity and ensures the unrestricted downward flow of rainwater.

Recycling and processing in a closed material loop

At the work site near Berlin, the two Kleemann plants mainly process pre-crushed and screen material. This includes large amounts of crushed rock, which is processed for reuse or is crushed to produce high-grade chippings. The tolerances for the grain sizes in railway ballast production are very tight. An important quality criterion is to observe these values, which is why the cone crusher is fitted with an oversize grain returning system. From the single-deck post screening unit of the MOBICONE MCO 90i EVO2, the oversize grain can be transported via a return conveyor back to the feed hopper and therefore processed in a closed material loop. The large screening surface with optimised screen utilisation makes effective screening possible even for grain sizes below 20 mm.

For separating other grain sizes, a screening plant MOBISCREEN MS 953 EVO is positioned downstream of the cone crusher. The classifying screen has large screening surfaces, which guarantee a high throughput even with small final grain sizes. Thanks to the plant design and overall concept, these screening plants are ideal for coupling with the Kleemann crushers.

Line coupling saves fuel and relieves the burden on personnel

The complete process is optimised by line coupling of the machines: the interaction of crusher and screening plant is stabilised via an automatic control system. Although both machines work independently of one another, in case of malfunctions or overfilling they send signals to the upstream or downstream machine. In case of a malfunction or overflow, the plant train is then switched off quickly and reliably. Among other things, this saves fuel and relieves the burden on personnel: there are no emissions at the upstream or downstream unit and, furthermore, a single person can operate the complete system.

SPECTIVE CONNECT from Kleemann creates flexibility

The SPECTIVE operating concept with the new digital solution "SPECTIVE CONNECT" contributes to efficiency. User guidance via the 12-inch touch panel on the crusher is easy and clear. SPECTIVE CONNECT makes data additionally available in the area of the crusher because it transmits all important machine information per WLAN in a radius of approx. 100 m to a smartphone with the SPECTIVE CONNECT App. Wheel loader operators or site managers, for example, can inform themselves of the status, the output or consumption values of the plant and view possible fault messages.

**Extensive support**

To achieve maximum availability, the plant owner highly values the service from Wirtgen Germany because "the service quality is impressive. A corresponding service contract makes the work easier for us and we know for sure that everything will be completed in good time," explains Michael Schwarzer, Managing Director of the Erdtrans company group. The new crusher shows clearly that modern machine technology can be used to produce railway ballast and other high-quality products from recycling material.

**Photos:**

  
KL\_MCO 90 EVO2\_Recycling\_DE

The mobile cone crusher MOBICONE MCO 90i EVO2 from Kleemann is used in combination with the mobile screening plant MOBISCREEN MS 953 EVO for the production of railway ballast and high-grade chippings.



**KL\_MCO 90 EVO2\_Recycling\_DE\_1**

The MCO 90i EVO2 and MS 953 EVO are connected with one another by line coupling.



**KL\_MCO 90 EVO2\_Recycling\_DE\_2**

Erdtrans Managing Director Michael Schwarzer (left) and special consultant from Wirtgen Germany Peter Schabacker (right) viewing the new operating concept SPECTIVE.

Note: These photos only provide a preview. For printing in the publications, please use the photos in 300 dpi resolution which are available in the added download.

Further information is available from:

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