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New Product

Fill Enters North American Market with Swingmaster Decoring System

Making its North American debut Fill Technik der Zukunft, Gurten, Austria, is introducing its high-tech, cost effective solutions for machinery and equipment design to the North American metalcasting industry. Among the innovations Fill is unveiling is the swingmaster sm3 for decoring.

Distributed by Rimrock Corp., Columbus, Ohio, the swingmaster sm3 comes equipped with its integrated corecracker- the hammering unit that combines the decoring machine and hammer station equipment into one design.

To effectively decore aluminum castings, the core must first be cracked with a pneumatic hammer. After this is completed, high-frequency vibration causes the sand grains to rub together and break the resin bond.

The swingmaster sm3 allows for the decoring of a wide range of cast components through its multi-purpose fixtures and clamping devices, which also

allow for short change-over times. Depending on the casting, the decoring program PLC varies. The vibration frequency breaks the resin bond, while a swinging plate allows the component's decoring position to vary up to 270 degrees.

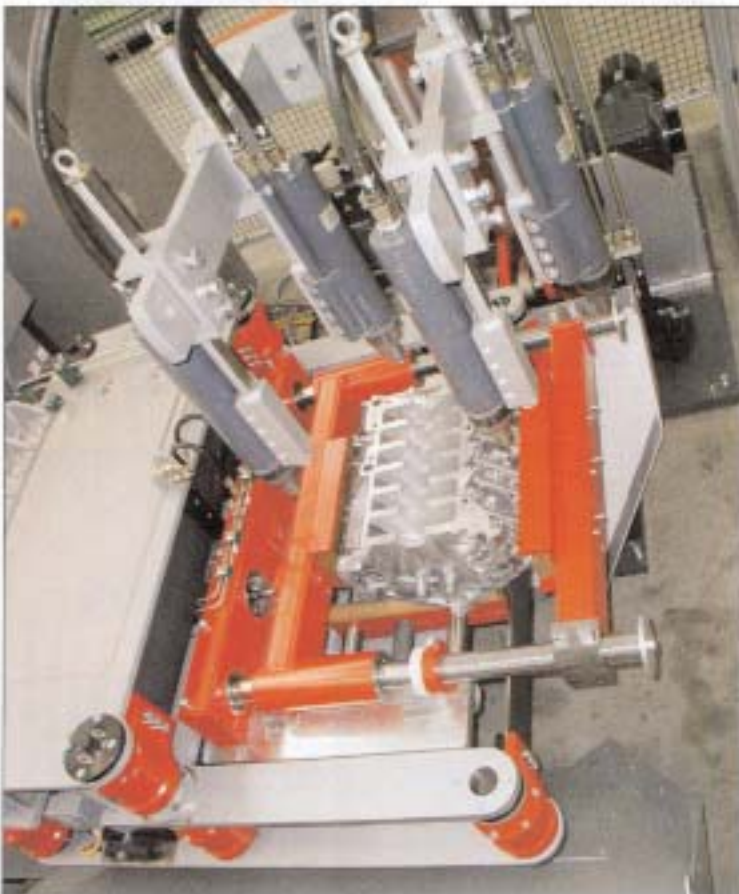
In production, after manual or automatic charging, the swingmaster clamps a component into place. The corecracker hammer moves into position and cracks the core. The frame with the impact cylinders is then rotated away and positioned above the swingmaster sm3. The spring mass oscillation introduces energy into the component, crushing the core. As the fixture rotates, the core sand is discharged at the bottom into a sand hopper.

Due to parallel vibration and rotation, the sand core is crushed and ejected out of the component's openings. After the vibration process, the clamping unit is automatically opened so the component can be removed. The duration of vibration and rotation can be easily programmed, and the

frequency and amplitude are set in line with the cast component.

The system delivers a high degree of flexibility, allowing up to four pneumatic impact cylinders to be positioned freely for core cracking. With the system, the clamping plate is freely accessible from above and residual sand is discharged in a targeted way at the bottom.

Other advantages to this technology include low production costs due to energy savings. The drive system utilizes the principle of self-adjusting spring mass oscillation rather than that of the conventional crank mechanism. This causes the energy to go into the casting rather than into the frame. Moreover, through the hammering unit's technology, the core is quickly cracked before the decoring process begins. These advances pave the way for low investment and operating costs due to reduced energy consumption and maintenance work. **MC Select NO.001 at www.moderncasting.com/info**



The technology used in the swingmaster sm3 provides for low investment and operating costs due to reduced energy consumption and maintenance work

The singmaster sm3 features the corecracker, a hammering unit that combines the decoring machine and hammer station equipment into one design, allowing for superior decoring performance and flexibility while reducing costs.