

Henschel boosts efficiency

Henschel Mixing Technology used K 2010 to highlight its latest developments designed to increase the efficiency of mixing processes. The company, which is a division of Zeppelin Reimelt, showed two new machines - its EFF 1700 horizontal cooler mixer for PVC dry-blends and the CMI container mixer for products such as masterbatches and ABS. Both have been optimised for maximum operational and energy efficiency.

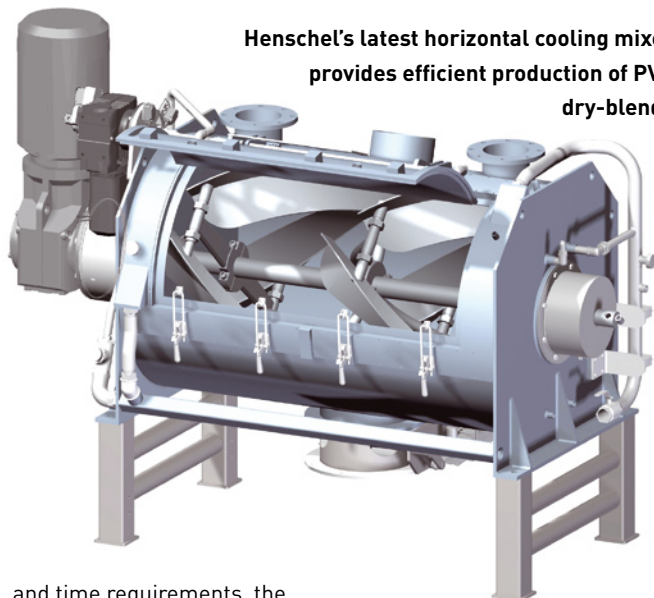
The EFF 1700 achieves its efficient cooling performance thanks to a newly designed vessel systems and cooled mixing tool with enlarged surfaces. The complete inner chamber of the mixer and the mixing tool are equipped with a double-walled heat exchanger. A special laser welding technique followed by forming and inflating processes are used to create the Thermplate mixing vessel with its double-wall plate system for heat

transfer. Water, steam and thermal oils can be used as the temperature-control medium.

There are three cooling circuits located in the vessel itself, in the side walls, the lid and the spiral tool. The various double-walled chambers are quickly cooled by the "turbulent" cooling system. In addition, the patented mixing tool is designed to offer an increased surface area for cooling.

The vessel is completely manufactured from stainless steel and can withstand pressures up to 10 bar. Polished surfaces in the product chamber help to prevent caking.

The horizontal cooler mixer can be operated as a single machine or integrated into an existing production line. It has also proved its effectiveness in the manufacturing of PVC. The production of PVC dry-blends requires blending the polymer with fillers and additives in a heating mixer, followed by subsequent cooling in a downstream cooling mixer. Because of cooling capacity



Henschel's latest horizontal cooling mixer provides efficient production of PVC dry-blends

and time requirements, the cooling mixer has typically been 2.5 times the size of the heating mixer. Henschel says that the efficiency of its design allows a considerably smaller cooling mixer to be used.

In addition, the company points out that the geometry of the vessel, mixing tool and discharge outlet have been designed to provide short filling and discharge times. These allow ten batches per hour to be achieved, instead of seven.

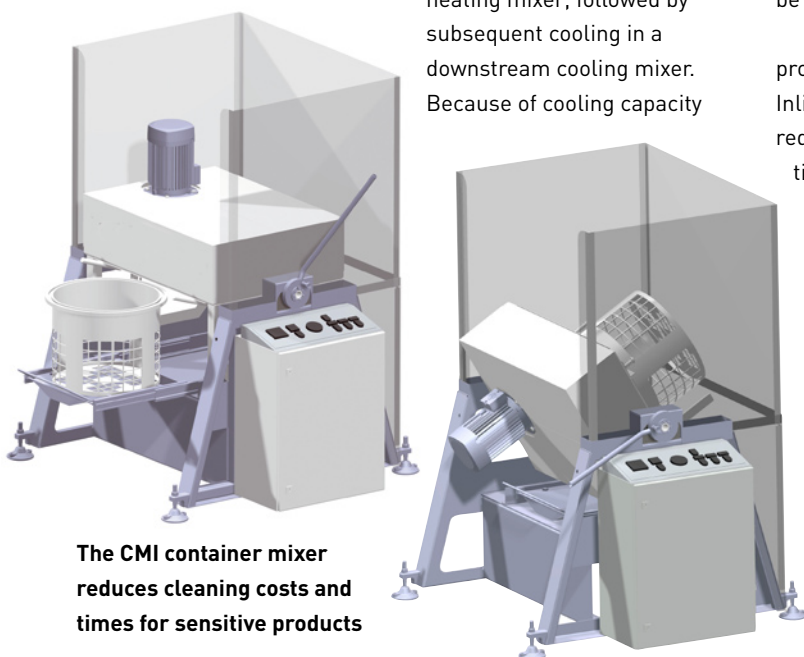
Henschel's other new product, the Container Mixer Inliner (CMI), was developed to reduce set-up and cleaning times in the paint industry, but it can also be used for other applications such as mixing ABS or masterbatches. It uses a plastic bag as an inner liner. This can be used for multiple mixes leading up to the next colour change, or it can be used for each batch as the packaging for the mixed product. The system is particularly useful for products where cleaning

is critical as the costs associated with this can be reduced considerably.

The 75 litre container has an effective capacity of 60 litres, enabling quick and reliable processing of batches of 25-30 kg. The patented mixing method involves a rotating mixing tool that is supported by the counter-revolving mixing drum at an inclination of 120°. The mixing container has a honeycomb structure to improve the clinging effect of the rotating container, quickly delivering homogenised product simply through the rotation of the container.

Cleaning can be carried out easily and quickly. A dry cleaning process will be sufficient for most recipe and colour changes, with more thorough wet cleaning used at a later stage. The shaft seal has been designed for single-use to avoid contamination, while the mixing head can be turned through 90° for easy operator access.

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The CMI container mixer reduces cleaning costs and times for sensitive products