

## Teamwork is the key

**Ackermann Fahrzeugbau GmbH of Wolfhagen, a company of the GESCO Group, was able to start up a foaming line for making PU sandwich elements for insulated truck superstructures at the beginning of last year. This production line has a drive system that is a complete novelty in Europe.**

Ackermann has its site about 35 kilometres west of Kassel in Wolfhagen/Germany. At this site, the company does not only produce individual sandwich panels on the basis of customer specifications, but also complete assembly kits for closed vehicle superstructures. Large-surface sandwich elements for cooling and insulation purposes are one of the key product groups. Such elements are predominantly used when the transported goods have to be kept at a constant inside temperature throughout the journey.

To make this type of sandwich elements, different material facings, such as plastic, metal or GRP, are bonded with polyurethane foam. In the past, Ackermann had only used a conventional press driven by a hydraulic system to produce these elements. This type of press does however have the drawback of not being flexible and efficient enough, if the sandwich elements' thicknesses have to be changed on a frequent basis. The reason is that additional spacers are needed to margin the distance between the two press platens to get the desired sandwich thickness.

The Ackermann specialists were therefore looking for a partner with whom they could realize their idea of a totally novel "clamping device", a system without any spacers but with an automatic adjustment for different element thicknesses. In the end, they chose to co-operate with Hennecke GmbH because, as Carsten Ramcke, project manager at Ackermann, put it: "Hennecke had given the most competent thought to the idea. They have wide-ranging experience in the construction of such complex foaming lines and can offer the complete system from a single source."

As soon as the order was placed in February 2001, both companies set to work together. As early as December of the same year, assembly of the PanelFoamer, which is the name of Hennecke's new machine, was completed on site. Before being delivered to Ackermann, the system was fully assembled and tested at Hennecke's facilities. When the PanelFoamer was started up on site, the company also changed over to using pentane as a CFC-free blowing agent.

This new foaming line enables Ackermann's vehicle engineers to make sandwich elements of different thicknesses in a continuous process without having to stop production or having to change any machine settings. The PanelFoamer automatically adjusts the required distance between top and bottom press platens. The operator enters the dimensions of the element to be produced and the metering machine also calculates the mixture output rate required for optimum foaming.



PanelFoamer with an effective area of 16.8 x 3.2 m

*Photo: Hennecke GmbH*

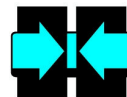
A distribution rake ensures that the PU reaction mixture will be evenly applied across the entire facing, the result of which is that the entire element has an extremely homogeneous foam structure and uniform density distribution.

In general, production with this new PanelFoamer has not only become more cost-effective now that sandwich elements can be produced flexibly with different thicknesses and facings, but also more reliable and safe. A system for automatic process data acquisition monitors and documents all production parameters ensuring continuous quality control.

**More information:**

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