



HIGH PRESSURE HEAT EXCHANGER FOR SANDWICH PANELS LINES

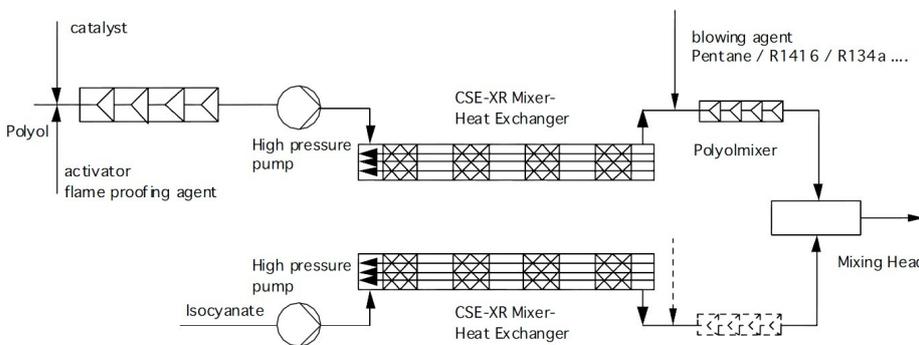
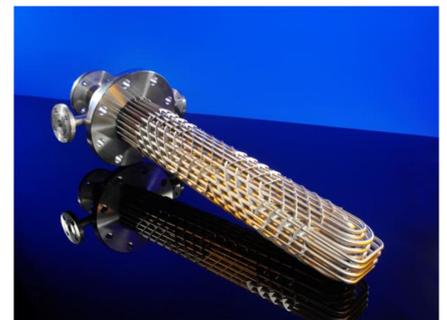
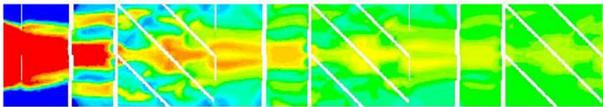
HEATING AND MIXING UNIT FOR POLYOL AND ISOCYANATE

Static mixers are successfully used for years for mixing and gasification of polyol with additives. The change-over to PIR-systems, however, often leads to problems in quality. Reasons can be found in insufficient mixing and temperature control. The novel CSE-XR® Polyol heat exchanger is for the first time capable to control both parameters of Polyol and isocyanate in the high pressure section.

From PUR- to PIR-Systems

If changing from PUR- to PIR-systems, much more attention must be paid to the parameters of mixing performance and temperature control, in order to maintain the quality of the foam. The increased sensitivity of double-band plants therefore often leads to the desire, to control the temperature directly before the mixing head. Up to now, however, this was not possible, since plate heat exchangers are not dedicated to high pressure applications. In addition it was recognised that the mixing quality is reduced due to the higher viscosities. The critical influence of the mixing quality of Polyol and the expanding agent is already known for many years. New is, on the other hand, the problem of decreased solubility of catalysts, activators, silicone and flame retarding agents and the thereby decreased foam quality. Intensive investigations made clear, that not only the shear rate in the mixer, but also the residence time in the mixing section is of high importance.

The novel CSE-XR mixer/heat-exchanger is the new standard in Polyol processes: it increases the mixing performance and guarantees an exact temperature control.



- The following features are proven facts:**
- very high heat transfer performance
 - small volumes for a fast change in the receipt
 - high mixing performance at low pressure drop
 - design pressure of 250 bar
 - construction completely in 316L/304/304L
 - long durability
 - no maintenance needed
 - attractive ratio of price/performance.