POFI ENGINEERING

Expert in Mixing and dosing efficency

HIGH-PRESSURE HEAT EXCHANGER

For sandwich panel production lines

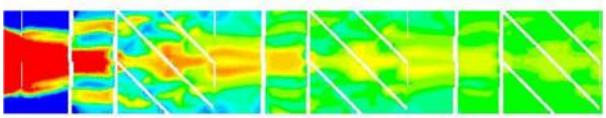
HIGH-PRESSURE MIXING AND THERMAL EXCHANGE UNIT FOR POLYOL AND ISOCYANATE

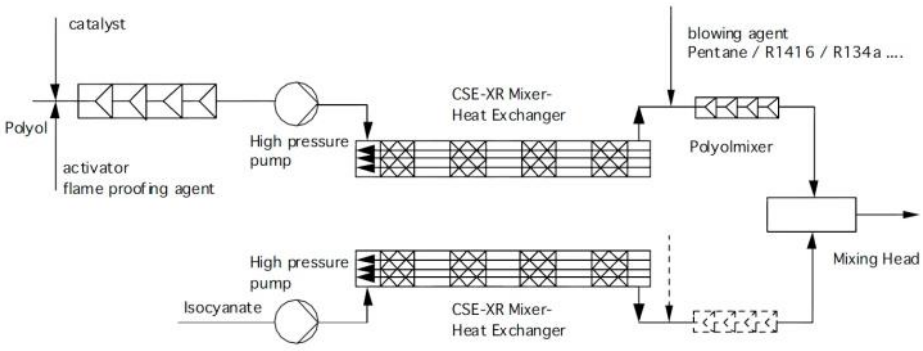
Static mixers have been successfully used for years for the mixing and gasification of polyol with additives. However, the transition to the PIR system often leads to quality problems. The reasons can be attributed to insufficient mixing and poor temperature control. The CSE-XR® Polyol heat exchanger is capable, for the first time, of controlling these two parameters under high pressure for both polyol and isocyanate.

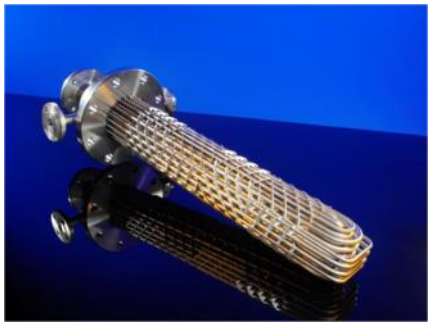
From PUR to the PIR system:

When transitioning from PUR to the PIR system, greater attention must be given to mixing and temperature control parameters in order to maintain good foam quality. The increased sensitivity of production lines often leads to a desire to control the temperature just before the mixing head. Until now, however, this has not been possible, as plate heat exchangers are not designed for high-pressure applications. Furthermore, it has been recognized that mixing quality is reduced due to higher viscosities. The critical influence of polyol and expansion agent mixing quality has been known for many years. The novelty, on the other hand, is the issue of decreased solubility of catalysts, activators, silicones, and flame retardants, resulting in a decrease in foam quality. Intensive investigations have clearly demonstrated that not only the shear rate in the mixer, but also the residence time in the mixing section, are of great importance.

The CSE-XR mixer/heat exchanger is the new benchmark in Polyol processes: it enhances mixing performance and ensures precise temperature control.







The following features have been proven:

- High heat transfer performance
- Small volumes for quick production changes
- High mixing performance for low pressure drop
- Nominal pressure of 250 bar
- Construction entirely in 316L / 304 / 304L
- Long service life
- No maintenance required
- Attractive price/performance ratio.

USEFUL INFORMATION
Our offices are open Monday to Friday from 8am to 18pm. Outside these hours thank you for contacting us by e-mail, we will respond quickly.

POFI-ENGINEERING SA
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