Press release

EREMA presents innovative filter discharge control system at NPE

DischargePro for clean melt the intelligent way

EREMA presents a new melt filtration development at the NPE show. EREMA's POWERFIL business unit showcases its latest innovation: DischargePro. The new control system for the EREMA laser filter sees the company improve process stability over the entire operating period because it reacts automatically to fluctuations during the recycling process. Melt loss is reduced by up to 50 percent as a result.

Ansfelden, 8 May 2024 - Recycling post consumer input material is characterised by a large number of fluctuations. This is a major challenge for recycling machines, and especially for melt filters. With the EREMA SW RTF® (backflush filter) and the EREMA laser filter, the recycling machine manufacturer offers two models of filter in different sizes, designs and performance levels. At NPE, EREMA's POWERFIL business unit will be presenting the new DischargePro control system for the EREMA laser filter.

The new laser filter control system significantly increases the level of automation by automatically compensating for fluctuations in the input material. By adjusting the speed of the scraper disc and the discharge screw according to demand, DischargePro ensures the melt thickens uniformly during filtration. This is a crucial parameter for a consistent and cost effective process. "The new DischargePro control system automatically determines the optimum process setpoints and ensures that these are maintained during the whole operating period of the laser filter," explains Robert Obermayr, Head of the POWERFIL business unit at EREMA. "This is made possible using fully automatic reinitialisation, which is time and/or event driven."

Up to 50 percent lower melt loss

The innovative discharge control system reacts to specific disruptive factors, such as:

- **Contamination peaks:** DischargePro automatically adjusts the speed of the scraper star, returning it to the setpoint speed as soon as the contamination peak has been discharged.
- **Reduced throughput:** The new laser filter control system detects significant changes in throughput and automatically adjusts the discharge rate so that thickening remains consistent during filtration.

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- **Increased viscosity:** As soon as the melt has a higher viscosity and, as a result, creates a higher pressure drop across the filter screen, DischargePro automatically adjusts the setpoint value to ensure a consistent discharge rate.

Longer-term changes are also taken into consideration because DischargePro takes the ongoing condition of the filter screen into account. Over the course of the screen's utilization period, its effective surface area decreases, causing the pressure drop to increase even though the input material is still the same. The intelligent control system reacts to this by automatically adjusting the setpoint to continuously ensure the optimum thickening ratio is achieved.

"Our new laser filter control system delivers greater efficiency and more stable processes for our customers and is particularly user-friendly," emphasises Robert Obermayr. The machine operator no longer needs to readjust the filter, which reduces the personnel time required. Depending on the application and degree of contamination, DischargePro reduces melt loss noticeably. "We have been able to achieve up to 50 percent lower melt losses for our customers compared to the previous EREMA laser filter control system," says Obermayr.

50 percent larger screen surface area

Another of EREMA's innovations in filtration technology is the new 2/406 size of laser filter. Compared to the 2/356 laser filter, it has a 50 percent larger screen area. With a larger surface area, EREMA enables the filtration of plastic melt at a much higher rate, which is a clear advantage for applications where throughput has priority.

Visit EREMA at NPE: **West Hall, Stand: W4471**

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Photos:

Christian Sommer, Application Sales Manager at EREMA, will be presenting the new DischargePro laser filter control system at the NPE.

The new 2/406 size of the EREMA Laserfilter, with its significantly larger screen surface, is ideal for applications where throughput has priority.

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EREMA Engineering Recycling Maschinen und Anlagen GmbH

POWERFIL is a business unit of EREMA Engineering Recycling Maschinen und Anlagen GmbH. Since its founding in 1983, the company has specialised in the development and production of plastics recycling systems and technologies for the plastics processing industry and is regarded as the global market and innovation leader in these sectors. EREMA is part of the Austrian group of companies EREMA Group GmbH based in Ansfelden/Linz.

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