

First Experience with the new High Consistency Disc Filter HiCon 2.0

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The presentation deals with the challenges associated with the operation of disk filters. In addition to monitoring and maintenance requirements of conventional filters, there is significant potential for improvement in terms of robustness, capacity and energy.

The design of today's disk filters often requires them to be fed with relatively low consistency. The reason for this is the feared vat thickening especially for high freeness pulps. The filter bags are exposed to high mechanical loads and easily damaged. In the worst case, the filter may be fatally damaged.

Although the power consumption of the disk filters is relatively low, the required dilution in front of the disk filter is associated with a considerable loss of pumping energy and drainage capacity.

Likewise, during process fluctuations or problems in the system, an uncontrolled increase in consistency in the disk filter can occur. During these moments, the operator's attention is often tied to other spots. The critical situation at the filter remains undetected.

An important step to improve the situation was the introduction of BaglessPlus technology. Compared with bagged segments, these resist difficult situations significantly better.

The newly introduced HiCon technology of the IDF disc filters from the Voith BlueLine series, however, allows a quantum leap in terms of robustness and capacity.

The advantages of higher consistency can be fully utilized with HiCon. The HiCon 2.0 technology consists of two components. First, the HiCon disc filters are equipped with a solid rail system, in which the discs are safely guided.

In order to effectively combat the problem of vat thickening, the flow pattern in the vat is virtually reversed. The critical areas in which the pulp thickens up can thus no longer arise.

On the basis of successfully running installations, it is shown which operating conditions are possible with this concept.

The presentation concludes with options how existing disk filters may be upgraded to the latest disk filter technology and HiCon.