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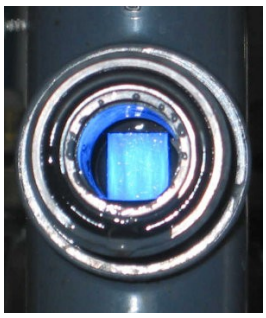
Automatic dosing of Polymers to Decanter Centrifuges

The operation of dewatering centrifuges in wastewater treatment plants is costly, labour-intensive and requires considerable expertise.

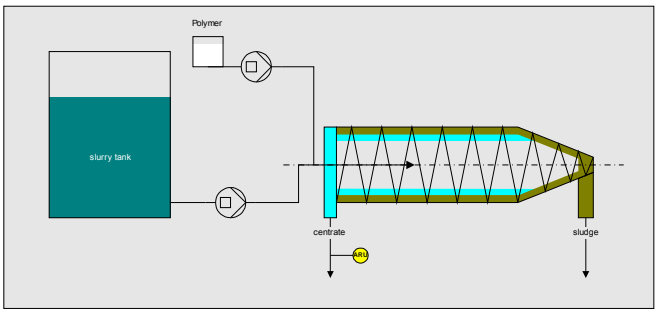
Especially the polymer consumption, the sludge disposal, and the load of the wastewater treatment plant by the centrate entail substantial costs. These costs are dependent upon each other.



Experiments have shown that in most cases a minimum turbidity of the centrate is accompanied by an optimal dry matter content of the dewatered sludge.

If the amount of polymer dosage corresponds to a centrate turbidity as low as possible, a maximum possible dry matter content follows. The total costs of the drainage are minimized with that.

Objective of the measure is a consistently good dry matter content in the sludge discharge, a consistently good quality of the centrate and their continuous monitoring.



After manual start-up of the centrifuge, the **ARU** dosing control system continuously monitors the turbidity of the centrate and leads to the required quantity of the polymer. This ensures a uniformly low turbidity of the centrate over the term of the centrifuge. High dry matter content in the centrate, i.e. dark or black centrate is largely avoided or eliminated in the short term.

In addition, the graphical representation of the centrate turbidity is a valuable tool for the operator of a centrifuge. The effects of parameter changes, as seen i.e. changes to the throughput or changes of nominal torque or nominal pressure on the stability and the quality of drainage of the centrifuge, can be detected very quickly and effectively with the contactless **ARU** centrate measurements.

By using the **ARU** dosing control system, the runtime of the centrifuges gets independent of the working hours of the staff. During working hours, errors can be redirected to the competent operator. Outside working hours, the centrifuge can be shut down automatically if necessary.