

Experiences with the drum thickener Siljan RotoMaster and the polymer control unit Siljan PolySave, in the waste water treatment plant of Rättvik

The drum thickener Siljan RotoMaster, is placed before the digester

A rotary drum thickener, Siljan RotoMaster SF 17, was installed in May 1998. The drum thickener was placed prior to the digester, for thickening of sludge from a basin. The incoming sludge DS-content varied between 0.5-1.5%. The experiences with the installation are as follows:

1. The DS-content of the incoming sludge to



A very pleased operator, Anders Nygårds, at the Siljan RotoMaster drum thickener

The Siljan PolySave control system

The Siljan PolySave control system was installed in 1999. The experiences are as follows:

1. The polymer consumption was reduced with 30-50 %.
2. The pause-function, activated if the incoming DS-content of the sludge is too low, has significantly saved both electricity and cleaning water.
3. The workload on the operator was heavily reduced and is today down to a weekly cleaning of the filter drum with high pressure water and cleaning of the sampling equipment, also once a week.

- the digester was increased to ca. 4.5%.
2. The gas production was doubled, much due to a better digestion of the higher DS-content of the sludge.
3. The energy consumption was significantly reduced, due to increased gas production and reduced amount of water in the sludge (no longer needed to be heated).
4. The increased digestion of the sludge, reduced the amount of dewatered sludge from the digester with 35-40%.

The following items were nearly cut to half:

- a. The cycle time for the centrifuge, which in turn resulted in reduced:
 - Energy consumption (~50%)
 - Polymer consumption (~50%)
 - Centrifuge maintenance (~50%)
- b. Transportation costs
- c. Waste disposal costs



The Siljan PolySave control system

4. Through setting the DS-content of the filtrate at a constant level, the DS-content of the thickened sludge was also kept constant. The DS-content of the thickened sludge remained constant independent of the incoming DS-content and volume/hour incoming sludge.

24-7 continuous operation !

The Siljan -RotoMaster and -PolySave combination has proven to be very reliable.

The equipment is currently run 24 hours per day, every week, all year around.