CASE STUDY:

LACKEBY FLOATING DECANTER

GRÖDALAND RENSEANLEGG

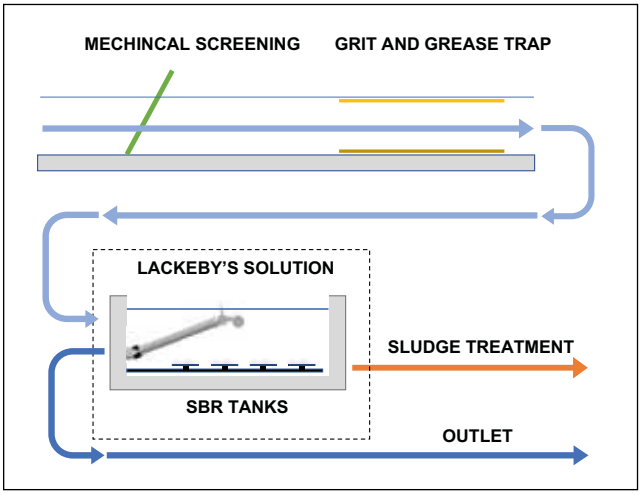
Lackeby Floating decanters for the new SBR process

IVAR wastewater treatment plant Grødaland in Hå municipality is a chemical / biological sewage treatment plant with four SBR tanks and flotation facilities. After the chemical and biological treatment the sludge is centrifuged and transported on to Nord-Jæren biogas plant for further treatment. The Grødaland plant also receives household wastewater from Varhaug and industrial waste from Kviamarka Foods Park and Norsk Protein AS.

The facility was rebuilt in 2008 and as a solution for the biological treatment they chose an SBR process. The requirements were a maintenance-free and reliable design, with efficient decanting and minimal need for electric components.

IVAR IKS

IVAR IKS is a municipal operating company that manages the operation of the water and sewage facilities in Finnøy, Gjesdal, Hå, Klepp, Kvitsøy, Randaberg, Rennesøy, Sandnes, Sola, Stavanger, Strand, Time and Hjelmeland, with a total population of approximately 320,000 inhabitants.



Lackeby's solution:

The choice was the Lackeby Floating decanter because of the robust, innovative and maintenance-free design.

Decanting of the clear phase always takes place with a great distance from the bottom sludge while being sufficiently distant to surface. In this way, swirling with sludge escape is avoided. This together with the fact that the decantation takes place over a large surface means an unmatched ability to decant the clear phase.

The design is based on a floating construction where the outflow is driven by the level difference between the SBR tank and the outlet basin. Opening & closing of the decanting orifices takes place gravimetrically with rubber-coated balls. This enables one outflow without pumps and motorized operation. Only one electric or pneumatically controlled outlet valve and one level sensor is needed.

Lackeby's decanter is also completely maintenance-free, which makes life cycle cost extremely low compared to many others competing solutions.

Results:

The plant today has four SBR tanks with Lackeby Floating decanters.

The model is a FD 400-300-16. The average design flow was calculated to 610 m^3/h and in reality you are just about over this flow and thus can handle the required decanting time with some margin.

Due to the fact that the decantation takes place over a large area the problems with sludge entry is neglectable. The clear phase is of very good quality and well within set limits.

In the beginning, one experienced small venting problems in one of the decanters. After a visit by the Lackeby team, it was determined that the problem was caused by foam blocking the air release valve. After adjustment, no additional maintenance has been required.

Lackeby Products AB has more than 50 years of experience in designing and manufacturing high performance products for resource-efficient heat recovery and wastewater recycling. In our production facilities in Sweden we have made thousands of products for the toughest environments worldwide. We are well known for our ability to customize products to each customer's unique requirements.

All of our products are characterized by reliability, long life cycles and easy maintenance making Lackeby Products a trusted partner and supplier of products for plant upgrades or new plant constructions. We guarantee high quality, excellent performance and complete satisfaction.

© All rights reserved Lackeby Products AB 2019

LACKEBY

Lackeby Products AB

Contact details: Phone: +46 480 770 100 | www.lackeby.com

Visiting address: **Kalmar** | Torsåsgatan 5F | SE-392 39 Kalmar | Sweden
Kungälv | Bultgatan 28 | SE-442 40 Kungälv | Sweden