ООО ХУБЕР Текнолоджи

HUBER Drum Screen LIQUID - innovative overall process succeeds in Norway

In Øygarden, one of the most modern wastewater treatment plants in the country was built - with innovative and optimally matched HUBER technology.
Watch the following video to get an impression of the entire purification process at this remarkable wastewater treatment plant.

Video: Complete wastewater treatment at the Øygarden WWTP in Norway

https://www.youtube.com/watch?v=KU2awn3DP68

After IFAT 2018, HUBER reported about the order for the Fjellvar project, which is the largest HUBER order in Norway so far. In cooperation with the Swedish plant manufacturer Purac and the HUBER service team from Norway and Germany, the supplied HUBER complete solution was installed and successfully commissioned at the end of 2019. The overall project was coordinated by HUBER Sweden in cooperation with HUBER Germany. The first commissioning went off quite smoothly in less than a week. At the beginning of 2020, the Fjellvar wastewater treatment plant was then able to start up on schedule. The smooth and on-schedule implementation of this complex process and mechanical engineering project shows exemplarily how advantageous it is when "everything comes from one

Complete HUBER solution, installed and ready for operation

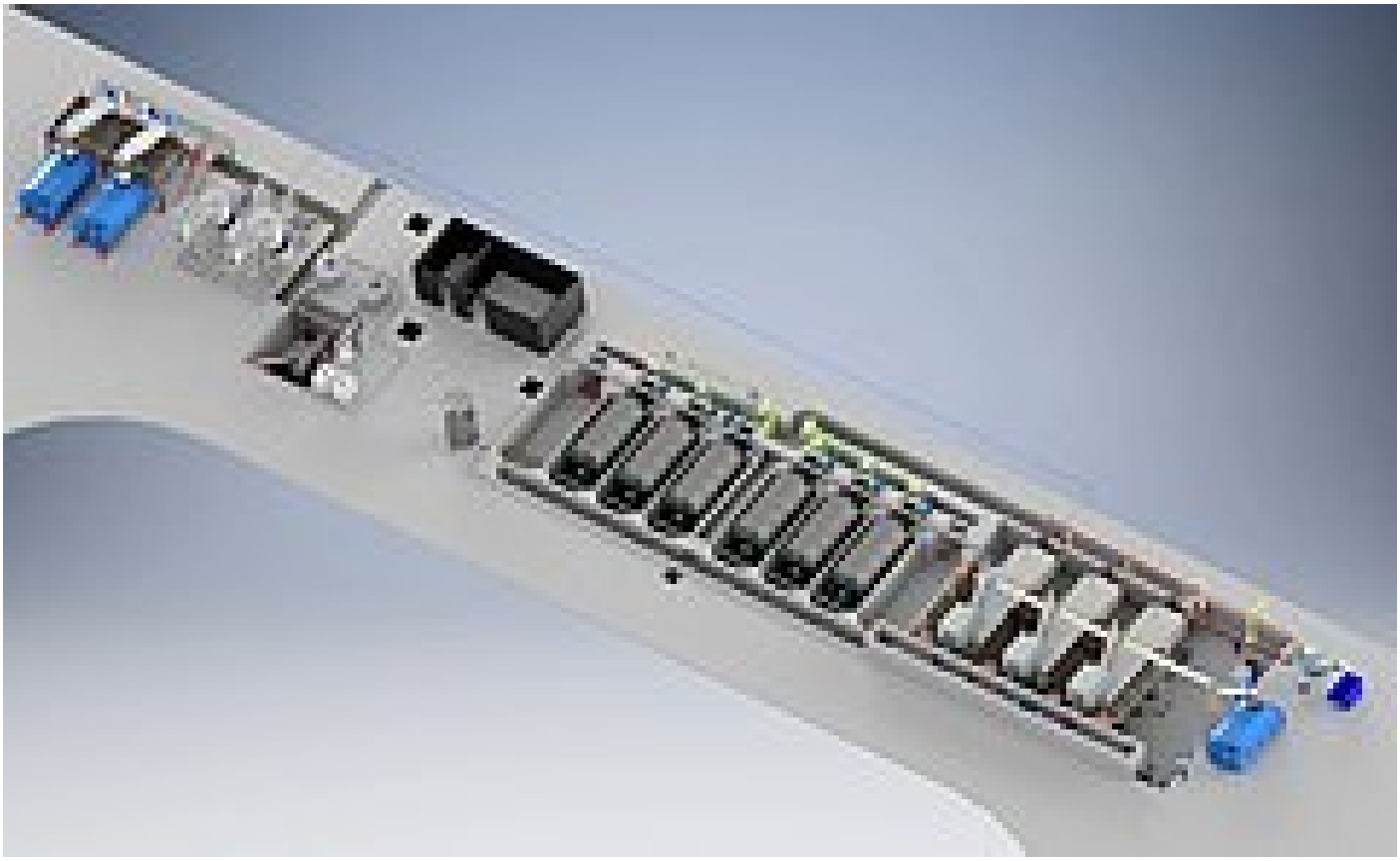
source".

The municipality of Fjell on Norway's west coast, just outside the town of Bergen, comprises more than 300 large and small islands.

Since the late seventies a bridge has connected Fjell with Bergen, Norway's second largest and fast growing city. Fjell, where property prices are still cheaper than in the big city of Bergen, is also growing steadily and has now become a residential and sleeping settlement, where 23,000 people live today.

By 2050, the population is expected to reach 40,000. The construction of another bridge is planned, which will shorten the distances for commuters to and from Bergen. Due to this development, it was also decided to build a new, central sewage treatment plant. The company FjellVAR was awarded the contract to design the plant, whereby the various districts and settlements will be connected via tunnel systems.

One of the main reasons for awarding the project to Purac was the very limited space available for the construction of the Fjellvar treatment plant. For this reason, the sewage treatment plant was completely planned into a mountain called Storanipa.



Overview of the full solution with 100% HUBER machinery for mechanical pre-treatment

Sludge dewatering with two HUBER Screw Press S-PRESS

The concept provides for a multi-stage expansion, which includes compliance with the following minimum standards:

Limit value stage 1 (without biological stage):

- 20% reduction of BOD_5 or < 40 mg/l BOD_5 in the outlet and
- > 50 % reduction of filterable solids (FS) or < 60 mg FS/l in the outlet of the sewage treatment plant

Limit value stage 2 (with biological stage):

- 70% reduction of BOD_5 or < 25 mg BOD_5 in the outlet and
- 75% reduction of COD or < 125 mg COD/l in the outlet of the sewage treatment plant

In addition to a service contract for 15 years including the necessary wear and spare parts, HUBER's offer included a mass balance as well as calculations of the energy, polymer and water consumption of the entire system and a variety of machines. For the specified operating conditions with 300 l/s (500 l/s design capacity) and 100% redundancy, HUBER put together a solution consisting of the following machine technology:

- Preliminary screening and grit trap: 3 x HUBER Complete Plant ROTAMAT ® Ro5 with 6 mm screen
- Grit treatment: 1 x HUBER Coanda Grit Washer RoSF4
- Fine screening: 6 x HUBER Drum Screen LIQUID
- Sludge thickening: 2 x HUBER Disc Thickener S-DISC
- Sludge dewatering: 2 x HUBER Screw Press S-PRESS

With a conventional primary clarifier, the separation efficiency can only be improved, depending on particle size, by providing more surface area and thus space. For this reason, the system of mechanical separation of primary sludge with a HUBER Drum Screen LIQUID is up to ten times more economical in terms of space requirement than a traditional primary clarifier.

- High throughput capacity with low pressure loss
- Small space requirement
- Specially developed PU sealing system in the inlet section for best possible separation efficiency
- Stable stainless steel mesh for maximum operational reliability
- Automatic high-pressure cleaning with process water
- Low wear, low maintenance costs

- Low energy consumption

Also in this project, HUBER could impressively demonstrate how an economic and powerful solution can be designed with innovative products and extensive experience and finally be successfully implemented in a cross-company cooperation. At this point, we would like to thank everyone involved in Norway, Sweden and Germany.

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