

Handling solids in wastewater the Grundfos way

VINDERUP, DENMARK: Rose Poultry is a large-scale poultry processing company that provides poultry products to catering industries, restaurants, other processing industries, etc. The company facilities emit 1.5 million litres of wastewater every day. Being full of large chunks of solid waste, this water must be filtered before further treatment. As a result, Rose Poultry needed a solution capable of handling vast volumes while also providing highly specific wastewater treatment. Grundfos was able to supply exactly what they needed.

TOPIC:
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LOCATION:
Denmark

COMPANY:
Vinderup

The Situation

At Rose Poultry, wastewater comes from all production areas. Consequently, pumps are called upon to transport all kinds of waste and refuse – including rubber gloves! The local public wastewater plant does not accept unfiltered wastewater, which means that Rose Poultry must carry out initial treatment to remove all large solids from the water before sending it on.

The Grundfos Solution

Grundfos created a solution that meets every requirement and fulfils all environmental criteria. The wastewater is collected in a large pit and pumped onwards into a mechanical screen. Here, the solid waste is separated out. This waste is then transported to a special wastedisposal site for further treatment.

The first pit contains two Grundfos wastewater pumps with channel impellers, providing performance of 20 l/s x 25 mWC. The pumps have an unusually large free passage of 100 mm, allowing the chunkier bits to pass with ease. The discharge line has a diameter of 200 mm and is 500 m long.

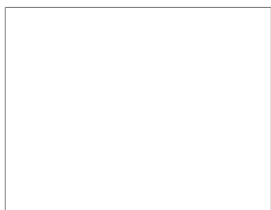
The pumps are mounted on complete guide-rail systems, ensuring fast and easy service. Frequency control means that pump performances is continually adjusted to suit pit levels, and the pumps alternate on a weekly basis.

Once the solids have been removed, the wastewater is led to a second pit. From here, it is ready to be pumped onwards to the public wastewater- treatment plant. The specifications for the second pit are similar to those of the first one, except that the head is 6 m rather than 14. Also, the discharge line from the second pit is all of 3,500 m long.

The Outcome

The pumps have handled the difficult waste with perfect ease. Bo Albriksen, the chief engineer responsible for the day-to-day operation of Rose Poultry, is very pleased with the new Grundfos solution: "Adjustments were made during the initial stages to maximise efficiency. As a result, all pumps and controls have provided admirable performance in this highly demanding environment since October 2000."

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