



New Grundfos hydraulics reduce clogging problems and help build confidence into wastewater handling

When the Water Authority Vechtstromen in the Netherlands built a new wastewater pumping station, they installed the new Open S-tube® impeller into a SE pump, to ensure reliable operation.

Vechtstromen is a regional water authority in the East of the Netherlands. Within its water management area there are 23 midsize cities. The operations and maintenance department runs 106 pumping stations and 23 wastewater treatment plants. One old pump station had to be demolished and was replaced with the new one called 'Erica'.

The situation

Clogged wastewater pumps are very costly to utilities. Besides work required to clean the pumps, clogging often leads to unreliable operation in the wastewater network and even overflow to the environment.

The pumps in the old station were from 1987 and at the end of their life. They clogged several times per month, and in weeks with heavy rain, it could be several times per week, each time requiring dismantling and cleaning. A replacement of the pumping station was scheduled for 2018. The new pumps had to meet demands to be free from clogging and have minimal lifecycle costs for 25 years.

The operations team no longer wanted to throw money at old technology, so they turned to the Grundfos sales team in the Netherlands for a more reliable and permanent solution.



The satisfied Operations Manager, Ivo ten Brinke (right), shows around the new pumping station.



The solution

The pumping station 'Erica' was the perfect place and time to introduce the new Grundfos Open S-tube® impeller; a leading hydraulic technology ensuring high operational reliability and durability, a high wire-to-water efficiency and a high level of serviceability.

After a study of the situation, consideration of the location, characteristics of the pumping station and with the quality of water in mind, Grundfos delivered a SE pump fitted with an Open S-tube® impeller to avoid clogging issues like those from the old pumping station.

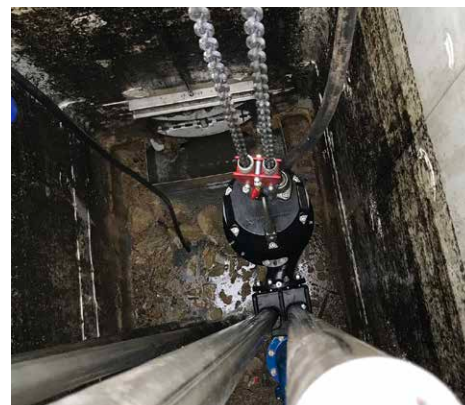
The result

The new pumping station began operating in September 2020 and the results have been impressive. Since the installation of the new Grundfos pumps fitted with Open S-tube® impellers, there has so far been no clogging events at all and no need for any unscheduled service calls. This is very impressive compared to the three to four service interventions per week with the old pumps.

"So far, the SE pumps have run for around 1000 hours, and intervention has not been required," says Ivo ten Brinke, Senior Process Operator, Vechtstromen. "We carry out a yearly inspection of our pumps, and if the pump with the new impeller continues to operate in this way, we are very interested to see the state of the wear parts at that time."

About the Open S-tube® impeller

Open S-tube® semi-open impellers with two or three guiding vanes provide high efficiency and are ideal for frequency drive operation and a wide operating area. They are available on Grundfos SE/SL pumps, together with a range of other hydraulic designs, including Closed S-tube® impellers and SuperVortex free-flow impellers, for reliable and efficient operation with the highest level of performance in all wastewater applications.



The Grundfos 18.5 kW SE pumps are wet installed in the pumping station.



The pumps are operated by variable speed drives.