Saving Costs at Schiedam Pumping Station

Application market	Wastewater
Market segment	Wastewater Collection
Pumped medium	Raw, unscreened wastewater
Pump product	Bearing Frame
Country	Netherlands

Challenge

As in many other cities, the content of fibrous solids, including cloths, textiles, wet wipes, etc., that pollute the drainage systems of the city of Schiedam has drastically increased in the past. The 2007 installed three pumps from a competitor clogged regularly and had to be opened and serviced on a weekly basis. This, and the correspondingly low availability and reliability of the pumps resulted in high maintenance and operating costs and aroused great dissatisfaction with the customer after only a short period of operation. A solution to the problem had to be found. Due to the investments made in 2007, the funds available for this were very small.

Solution

For the mentioned cost reasons, first only one pump was replaced with the Hidrostal Screw Centrifugal Pump. Previously used electric motor and base plate could still be used, suction and discharge pipes were adapted. After short period of operation, maximum reliability of the Hidrostal pump was proven, which resulted in additional financial resources and a second pump was replaced by Hidrostal. Thanks to increased efficiency compared to the previous operation, the two new pumps are now sufficient for the designed flow rate, the third pump already installed is only used in emergencies.

Benefits

Continuously and non-clogging pumping the unscreened raw sewage without problems, the Hidrostal pump fulfils this difficult task with high reliability and to the complete satisfaction of the customer. Thanks to much lower maintenance costs and power consumption, overall life cycle costs of the whole plant were significantly reduced since the Hidrostal pumps are used.

Quantity of units sold	1 (2018) + 1 (2019)
Pump type	L12K-HS3R + LLM1F-X
Motor data	IEC frame size 400 / 400 kW / 6 pole / 50 Hz / 400 V with VFD
Material combination	Cast iron pump body with Hidrohard wear parts and stainless steel impeller
Duty point	Flow : 694 litres per second / Head : 30 meters at 1’004 rpm
In operation since	February 2019