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PROJECT REPORT:
SMARTER CONCERTOR PUMPS
OCTOBER 2019

Holland Board of Public Works Opts for Smarter Pumping Solution





The Water Reclamation Facility at Holland Board of Public Works (BPW) had two Waste Activated Sludge (WAS) pumps that were problematic for many years.

PROBLEM:

The Holland facility was struggling with two aging rotary lobe style positive displacement pumps. Their pump technology consisted of an electric motor, gear reducing device, coupling assembly, pumping assembly and wall mounted variable frequency drives. Lack of performance from the pumps and increased maintenance for all these items prompted the BPW team to look at more advanced technologies. Their hope was to reduce components, make maintenance easier and less often, raise efficiency, and maintain the flexibility to pump at various rates. They also wanted seamless integration with their plant's SCADA system.

SOLUTION:

After researching various pumping technologies, the team chose the Flygt Concertor smart pumping system. This smart pumping solution alleviates all the pain points for BPW's personnel. No longer is maintenance required for the motor/pump bearings, couplings, guards, seals, gear reducers, and VFD's. The stainless steel pump base design and telescoping inlet allow for easy pump suction inspection, and the service cart easily rolls back the pump for complete impeller and volute inspection. The smart pump technology built into the head of the pump offers variable speed operation, auto pump reverse upon clog detection, a premium efficient flood proof electric motor, constantly correct pump rotation and MODBUS connectivity to SCADA. The longevity of rotating parts is due to the hi-chrome cast iron impeller and insert ring that provide 10 times greater wear resistance than standard cast iron.

The two pumps were started up in May 2019, and have performed to the complete satisfaction of the BPW team. They look forward to many trouble-free and efficient years of WAS pumping.



Above: (left) The newly installed WAS Flygt's Concertor pumping system, (right) Human Machine Interface (HMI) that controls the Concertor pumps, and (middle) detail of Flygt Concertor pump.

Below: The old rotary style lobe pumps that we replaced.





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