FLYGT
a xylem brand

Case study

Flygt Pumps in Ada Township, MI

Flygt brand dry pit submersibles lower costs and eliminate unscheduled maintenance visits for Ada Township pump station

Scope

The Ada Township (MI) utilities department was experiencing frequent unscheduled maintenance visits and corresponding unbudgeted repair bills for the pumps at the township's main pump station.

The existing pumps were complex and had many moving parts to maintain. Each included a main pump assembly, seal pot mechanical seal system connected to an air compressor, couplings, shafting with pillow block bearings, shaft guards, and vertical electric motors on the top floor. The routine maintenance of these machines was a big job in itself, but when vibration and failing seals became a recurring problem, the township looked for a solution that would put a stop to the expensive repairs and maintenance.

Solution

Ada Township, in conjunction with their engineering firm Moore & Bruggink, contacted Kennedy Industries for assistance. Based on their extensive experience with Flygt dry pit submersibles, Kennedy Industries recommended that the township install three Flygt model NT-3315, 130HP dry pit submersible pumps to deliver 1,400 gallons per minute (GPM) at 205' total dynamic head (TDH).

The pumps were changed out one unit at a time by the township's mechanical contractor. The contractor first removed one of the old pumps, shafting, pillow block bearings, guards, seal water pots, seal water piping, air compressor lines, air compressor and vertical motors on the grade floor.

Installation of the Flygt dry pit submersible was much simpler, since the self-contained Flygt pump does not require installation of a seal water system, shafting, coupling, guards, or any other auxiliary items. The pumping assembly is designed for continuous operation in either a non-submerged or fully submerged environment. The motor is inverter-rated per NEMA MGI, Part 31 and is available as premium

Shafting, coupling guards, seal system, compressor, bearings and hydraulically operated valves required constant maintenance and repair.

End user:	Ada Township, MI
Client:	Ada Township, MI
Order date:	2014
Completion:	2015

efficient. Flygt dry pit pumps come standard with seal fail and high temperature monitoring, and if a seal failure were to occur in a Flygt pump, all leakage is contained in the pump, not spilled on the floor or flung on the walls.

A hard iron (25% chrome) impeller and insert ring is standard on all pumps above 10hp. This material upgrade provides up to 10 times better wear resistance when compared to standard cast iron, alleviating any concerns about grit and sand in the pumped media.

Flygt dry pit submersible pumps offer the innovative "N" impeller technology, a self-cleaning design that provides true non-clog pumping while reducing energy costs by 25 percent or more as compared with conventional pumps.

In addition to saving energy and reducing the cost of maintenance and operations, Flygt dry pit submersible pumps improve operator safety, since there's no longer a need to maintain 25-foot-long shafting or pull the pumps out for frequent repair.

Result

The Flygt dry pit submersible pumps have resulted in savings through increased energy efficiency, reduced scheduled and unscheduled maintenance costs, and improved safety for the operations and maintenance personnel.

Maintenance requirements have been dramatically reduced, as the Flygt dry pit submersible pump requires no seal water, seal water piping, solenoids, drains, shaft alignment, pillow block bearing adjustments, guard painting or bearing maintenance. Unlike the old conventional pumps, the Flygt pumps are submersible and would be unaffected in the event of a station flood.

The Flygt submersible pumps run smooth, cool, and quiet. Clogging impellers, shaft misalignment, vibration, seal failures, extreme noise, abrasive media wear, and bearing maintenance are all things of the past.

Standard air cushioned check valves and Flygt Pumpsmart VFD's allowed for the elimination of the old style hydraulic oil operated valves decreasing complexity of the system.

Xylem, Inc.
14125 South Bridge Circle
Charlotte, NC 28273
Tel 704.409.9700
Fax 704.295.9080
855-XYL-H2O1 (855-995-4261)
www.xyleminc.com

www.youtube.com/flygtus