

Durability and 24/7 reliability

How an innovative ultrahigh-head water transfer pump solved a complex problem and cut a project's energy by 15-20%

Challenge

Tasked with transferring water from settling ponds to a frac pond for project in mid-Western U.S., a specialist water provider to oil and gas drilling companies needed a pump capable of handling a complex operation through a seven-mile-long steel pipeline.

The project called for a solution capable of handling a challenging dynamic head of 680 feet (295 psi). This ultrahigh requirement often involves transferring water through a carefully coordinated series of pumps which adds ancillary equipment and increases energy consumption.

The team required something different and turned to Xylem to find a more efficient solution. After contacting their local Xylem team, the Godwin HL270M Dri-Prime® pump proved the best fit.

Solution

With a maximum head capacity of 984 feet, the Godwin HL270M is designed to remove water from deep mines or transfer water over long distances without the need to operate pumps in series. The durable, high-pressure pump is built with hardened wear parts and plates to operate reliably in tough conditions.

“When pumping water out of a mine or a settling pond, you are not usually dealing with clean water. You can control for those conditions to a certain degree, but it is a rough life for a pump. Our customers choose Godwin pumps because they want durability and 24/7 reliability,” Jon Craig, application engineer at Xylem, said.

Alongside efficiency and durability, economical fuel consumption was a key factor for the customer in selecting the Godwin HL270M pump. Its fully automatic, self-priming capabilities simplify operations and an enclosed impeller design delivers hydraulic efficiency of up to 70%.



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- CUSTOMER:** A specialist water provider to the oil and gas industry in mid-Western U.S.
- CHALLENGE:** To transfer water from settling ponds to a frac pond, the project required a system capable of handling a challenging dynamic head of 680 feet (295 psi) without any ancillary equipment or any increased energy consumption.
- XYLEM SOLUTION:** The Godwin HL270M Dri-Prime® pump was installed to deliver efficient, trouble-free operation. The pump's Field Smart Technology was deployed to automatically alert operators about any issue with the potential to develop into a problem.

The HL270M is available in diesel and electric-driven package pump sets and can be retrofitted to existing engines and bases to maximize a customer's investment. Another cost-effective option can be to rent a HL270M pump, especially for temporary projects.

Results

Compared to operating two pumps in a series, the HL270M pump saved the customer 15-20% in diesel costs.

Since the customer began using the HL270M pump, it has operated trouble-free for more than 1,400 hours. The pump's Field Smart Technology - an advanced telemetry and cloud-based monitoring and control system - automatically alerts operators about any issue with the potential to develop into a problem. This enables operators to focus on other tasks without constantly worrying about pump performance.

"Xylem's engineers worked closely with us to find the correct pump to meet our duty points and supply demands. We've been satisfied from day one with their communication and efficiency," the customer said.



The Godwin HL270M pumped water from settling ponds to a frac pond through a seven-mile-long steel pipeline, and saved the customer 15-20% in diesel costs.



The pump's Godwin PrimeGuard 2 controller is fitted with Field Smart Technology - an advanced telemetry and cloud-based monitoring and control system which automatically alerts operators about any issue with the potential to develop into a problem. This enables operators to focus on other tasks without constantly worrying about pump performance.