



ITT

Water & Wastewater
CASE STORY ■ WASTEWATER TRANSPORT

U.S. treatment plant eliminates clogging with adaptive Flygt N-impeller

Adaptive impeller moves axially to enable easy trash flow

Santa Fe is the bucolic state capital of New Mexico boasting a delightfully dry climate that attracts visitors year-round. Relatively low precipitation does have a backside, though. The city has long grappled with water scarcity issues, pursuing conservation measures serving as a benchmark for the southeast United States.

The Santa Fe municipal utility has now tackled another challenge—clogging at the city’s main treatment plant that choked the pumps. ITT Water & Wastewater was summoned.

Working closely with the customer, we provided a new type of Flygt N-pump that eliminates the problem altogether. During extensive trials, not one clog has occurred. The customer would now like all their small wastewater pumps equipped with the new adaptive Flygt N-impeller in which the impeller move axially to permit the easy flow of trash like plastics and rags.

Solution: adaptable impeller

With a daily capacity of around 13 million gallons, the treatment plant serves the entire city of Santa Fe and its population of 73,000. But the utility was experiencing a serious challenge at the clarifier scum pit at the treatment plant. The pumps clogged almost daily. Every week the pump station had to be cleaned by a vacuum truck to remove huge amounts of trash.

Plant Superintendent Luis Orozco was concerned. “The problem got so bad that even the vacuum truck got clogged because the scum contained grease.”

ITT was called in. A set of trials commenced with installation of our Flygt F-3085. This effective pump has fewer clogging tendencies, but testing



Customer: City of Santa Fe, New Mexico, USA

Challenge: Eliminating serious clogging at the main treatment plant serving the city

Products: Installation of Flygt N3085 pump equipped with adaptive Flygt N-impeller that can move axially to permit easy flow of trash

Benefits: No clogging. Lower maintenance costs

showed it could not completely solve the specific local problem of truly monumental amounts of trash like plastics, rags, baby wipes, straws and much else.

Technicians from ITT then suggested replacing the trial pump with our newly released Flygt N-3085 pump equipped with an adaptive impeller that can move axially when necessary, to allow for the passage of larger debris.

Engineered for life

When trash enters the volute the patented Flygt N-hydraulic pushes it from the center to the perimeter of the inlet. The new adaptive functionality makes it possible for the Flygt N-impeller to also move axially enabling very large debris to get through.

Not one instance of clogging has occurred after several months of trials. The pump station no longer needs to be cleaned by the vacuum truck. "We are more than impressed," said Mr. Orozco. "We are delighted with this new type of pump, which works great. The new Flygt N-technology has solved our problem. No more clogging!"

"My team no longer has to deal with the messiness of removing a pump and unclogging it and summoning the vacuum truck. This new Flygt N-pump technology saves lots of time, money and headaches."

"This new Flygt N-technology has solved our problem. No more clogging"

The innovative Flygt N-3085 features an adaptive impeller that significantly enhances the well-known anti-clog characteristics of the Flygt N-series. The impeller design coupled with a specially developed relief groove is self-cleaning. The patented combination dramatically reduces clogging risks and has been used for 10 years at more than 500 000 installations world wide. Now it can also be equipped with an adaptive impeller which improves the self cleaning characteristics of the Flygt N-impeller dramatically. It enables the impeller to move axially in the last stage of the self cleaning cycle, thus letting large debris pass easily.

The Santa Fe plant would like more of the new Flygt N-pumps and technology to deal with other issues –such as when batch reactors plug up.

Cost and efficiency benefits

Adaptive Flygt N-impeller technology from ITT Water & Wastewater has completely eliminated specific clogging issues at the main treatment plant serving the capital city of Santa Fe in New Mexico.

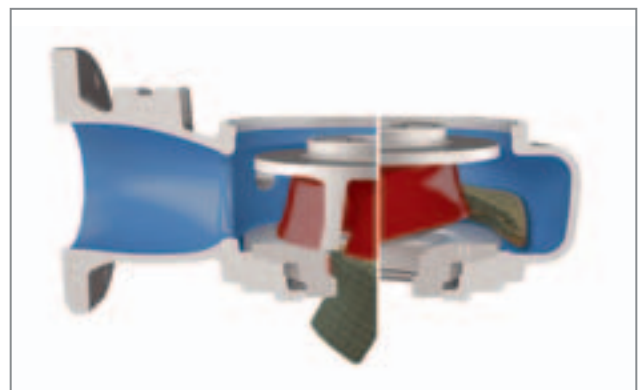
This new type of Flygt N-pump equipped with an impeller that can move axially effectively deals with huge amounts of trash, and also is self-cleaning. The utility no longer needs to summon a vacuum truck to clean the plant every week. Overall maintenance costs have been reduced.



The specific local problem—truly monumental amounts of plastics, rags, baby wipes, straws and much else.



The team no longer has to deal with the messiness of removing a pump.



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