

CIRCOR MARKS ALMOST 20 YEARS OF PERFORMANCE AND PRODUCTIVITY AT POLISH-GERMAN SEWAGE PLANT

PROBLEM:

When two separate sewage treatment plants on the border of Germany and Poland decided to combine their operations into a new facility more than 10 years ago, the primary requirement for pumping was clear: create a solution with low Total Cost of Ownership (TCO). Plant operators also wanted fast, on-site service and the freedom to allow just one employee to maintain all pumps.

SOLUTION:

As part of the renovation, CIRCOR replaced all of the facility's existing centrifugal pumps with compact ALLWEILER® progressing cavity pumps. Just as important, the relationship established an ongoing collaboration between plant officials and local Allweiler sales partners.

RESULTS:

Over the past decade, the installed pumps have operated virtually disturbance free, even when dealing with extremely abrasive liquids. In fact, the durability of wearing parts has actually exceeded the manufacturer's original specifications. A single installer can now maintain all of the pumps in the system, and the plant has been able to amortize the initial investment costs to achieve the low TCO it was looking for.



COMBINING INNOVATION AND QUALITY

In 1994, officials of the cities of Gubin in Poland and Guben in Germany – located on opposite sides of the Neisse River – found themselves faced with two separate, increasingly obsolete and overworked sewage treatment plants. So they decided the timing was right to build a shared treatment plant using progressing cavity pumps, instead of the centrifugal pumps used in the old plants.

In May, the joint Gubin sewage plant celebrated its 17th anniversary. The new facility processes wastewater from the city of Guben and also serves the Guben watershed on the German side of the river. Each year the plant processes approximately 4.3 million cubic meters of wastewater. The composition of the wastewater is usually normal, but three times each week a German chemical-fiber plant releases glycol-ethylene-contaminated wastewater directly into the digestion tower.

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Today, the joint facility includes 17 Allweiler progressing cavity pumps and two macerators. The macerators break down solids and fibers as they enter the plant. The progressing cavity pumps are used in nearly every step of the process. Delivery capacities of these units vary greatly, from a few liters per hour when adding flocculant to more than 100 cubic meters per hour when pumping sludge.

THE RIGHT CHOICE IN PUMPS

A key component of the renovation involved retrofitting the pumps on the German side, in order to pump wastewater to Gubin on the Polish side. Other changes included installing new pipes under the Neisse River and raising the plant by 4.5 meters to provide better flood protection.

Selecting the pumps was the easy part, according to officials. "In 1996, we decided to use the best pump technology available," said Dariusz Boche ski, managing director. Working together with the plant builder and planner, the two communities decided to use Allweiler pumps, the "Mercedes of pumps," as the operator describes them today. Another critical factor in the decision was the pumps' highly compact design, which saves valuable space.

A TRACK RECORD OF RELIABILITY

During the subsequent years of operation, it has become clear that the plant designers made the right choice in pumping technology. The pumps run continuously with no disturbances, wear is significantly lower than anticipated, and the service life of the rotors and stators has actually turned out to be much longer than Allweiler indicated in the design documentation.

That track record is even more impressive, when considering that the pumps were forced to undergo a major endurance test when the plant's primary sedimentation tank was sandblasted during cleaning a few years ago. Due to a mistake in the process, a large amount of sand entered the water. But the Allweiler pumps handled even this highly abrasive mixture without any disturbance and without incurring any obvious signs of additional wear.

EASY, ECONOMICAL MAINTENANCE

Thanks to all the pumps having a similar, modular design, in-house plant personnel are able to perform most pump maintenance themselves. When they need to undertake more difficult tasks, they turn to CIRCOR's local Allweiler

partner – Rodeike, in Ludwigsfelde – for rapid, on-site assistance. Polish sales partner GAA Lobex provides fast delivery of original parts.

MEETING TCO OBJECTIVES

Although there are other options for processing sewage that are initially cheaper than progressing cavity pumps, Allweiler's efficient, reliable solution has proven to provide lower TCO during almost two decades of service. Maintenance requirements have been minimal, and part wear has been significantly less than anticipated. With lower ownership and operation costs, the plant's choice of pumps has proven to be a wise one for the communities it serves.

ABOUT CIRCOR

CIRCOR, a business of CIRCOR International, is a global leader in critical fluid handling and transfer solutions for the commercial marine, defense, oil & gas, power generation and industrial markets. Additionally, CIRCOR provides lubrication management equipment and services through the company's Reliability Services business. With the broadest portfolio of pumping technologies and products, along with manufacturing, engineering, sales and technical support centers around the world, CIRCOR helps customers solve their toughest business challenges wherever they are located. Solutions provide the highest levels of reliability, efficiency and longevity with the lowest total cost of ownership through trusted product brands Allweiler®, COT-PURITECH™, Houttuin™, Imo®, LSC®, Lubritech®, Rossco®, Sicelub®, Total Lubrication Management™, Tushaco®, and Warren®.

ABOUT ALLWEILER

Allweiler GmbH is the oldest German pump manufacturer and the European market and technology leader for macerators and centrifugal, propeller, screw, progressing cavity, cogwheel, rotary lobe and peristaltic pumps. Headquartered in Radolfzell and with an additional location in Bottrop, Allweiler owns a foundry, produces its own stators, and manufactures ready-to-use fuel and lube oil skids and rinsing-water facilities for commercial marine, oil & gas, chemical processing, specialty chemical, and waste and wastewater applications.

Industrial Products & Services

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