

# WaterWorld®

## Progressive Cavity Pumps Help Ease Maintenance Problems

The Town Branch Wastewater Treatment Plant, serves approximately 130,000 people in Fayette County, KY, and the City of Lexington. Designed to treat a maximum of 64 mgd, the plant recently switched to the use of progressive cavity pumps to convey sludge around the facility.

Until recently, piston pumps were used exclusively for conveying the sludge. However, due to their design, the pumps had a tendency to strongly pulsate. In order to meet the demands of the plant, the pumps were operated at high speeds and pressures. The facility had issues with maintenance, leaking and a lack of protective devices on the pumps, and began researching alternative technologies.

Specialists at seepex proposed their BN range of progressive cavity pumps which operate virtually pulsation free. This ensures that the sludge is transported evenly. With pumps of this range, the drive is flange-mounted directly on the pump. Due to this low-cost design there is no need for a separate pump bearing.



This exploded view of the BN range of pumps shows the seepex Smart Conveying Technology.

The town selected four BN 35-6LS pumps. The BN range is the basis for all seepex PC pumps. The pumps are available in capacity ranges from 0.13 gpm up to 2200 gpm with pressures of up to 720 psi. The 35 frame size selected for Town Branch designates a 20-100 USgpm capacity.

The company recommended that the pump be equipped with new "Smart Conveying Technology" (SCT). This in-house innovation from seepex is characterized by the separation of the stator into two parts and the detachable connection between the rotor and the coupling rod allowing maintenance to be carried out in easy steps, keeping time and personnel requirements to a minimum. The stator halves are held in place by four retaining segments which act as retensioning devices. As the pump wears, these segments can be tightened to extend the pumps service life.

The pumps are also equipped with TSE temperature controllers, which prevent overheating by shutting the pump off if the temperature reaches unsafe levels.

The outcome is an integrated solution which ensures optimal pump maintenance and is protected against various kinds of damage.

"Compared to the previously used piston pumps, Smart Conveying Technology makes carrying out maintenance and repair work significantly easier," said Mike Smith, Maintenance Supervisor. "The spare parts are much more cost-effective and downtime constitutes a fraction of previous values." **WW**

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