

## Variant to activated sludge processing

WVT Aqua Concept GmbH, based in Germany, is offering various systems for treating wastewater. In the single-basin combination, wastewater is clarified using a system similar to activated sludge processing. The novel Biocos® process is a simple, yet extremely intelligent variant of the activated sludge technique. It comprises an activated sludge tank fed intermittently with recirculated sludge, according to the principles of activated sludge process, in combination with a sedimentation and recirculation tank based on single-basin technology. Two treatment lines and timer-controlled sequence of treatment ensure the necessary degree of clarification. Some advantages of this process include:

- Permanent biological denitrification;
- Low investment costs;
- Simple discharge of clean water;
- High performance with low-volume tank; and
- Eliminates the need for return feeding, raking and recirculation of sludge.

The treatment of highly concentrated industrial wastewater is achieved by employing WVT's 'Ultrasonic Plasma Resonator' (UPR). The new patented UPR works with the phenomenon of cavitation, which is evoked by the adequate treatment of any liquid with short sound waves. During the process, local pressures of about 100 bar and temperatures of over 12°C occur. This causes sono-chemical reactions and a purposeful treatment of chemical combinations in the liquid. UPR is the only single-machine procedure that combines the strength of short sound waves with a run-through process based on vacuum.

In another method, the VLB process, highly concentrated wastewater is treated in a tank made of concrete or steel which is filled, up to a third, with adapted activated sludge. The tank equalizes varying pH values, loads and temperatures. A feed system including an aerator ensures sufficient supply of oxygen. The whole plant is operated by a measuring and control system, and a PLC. *Contact: WVT Aqua Concept GmbH, In der Au 8, D 82362, Weilheim, Germany. Tel: +49 (881) 417 410; Fax: +49 (881) 417 412; E-mail: info@wvt.de.*