WASTE WATER

MECHANICAL ENGINEERING

AUTO-MATION

CLEAN WATER REMOVAL AW-HYDRODEK

Water-level guided floating clean water removal device for large discharge quantities up to 1,500 m³/h with optimum process integration and turbidity-dependent control of clean water outflow

APPLICATION

- SBR wastewater treatment plants
- Pond wastewater treatment systems
- Industrial wastewater treatment plants
- Water supply plants

PRODUCT DESCRIPTION

The task of the clean water removal (decanting) in SBR technology is, after adequate sedimentation of the activated sludge, to separate out the clean water phase, without accidental intake of activated or floating sludge during decanting. The new type of design solution guarantees this requirement is fulfilled to a high degree. The system consists of a floating body combined with an underwater draw-off funnel. Following the time schedule of release or turbidity measurement the draw-off funnel is lowered and clean water is drawn off via the movable discharge pipe. Due to the floating design, the discharge equipment follows the water level. Thanks to the tried and tested wks control system (according to the discharge quantity and turbidity), the clean water is removed during the sedimentation phase and thus reduces the process time. After the removal time has elapsed or following increased turbidity measurement the outlet closes again automatically and a new SBR cycle begins.

DESIGN FEATURES

- Automatic adaptation to rising and falling water level as a result of swivel joint construction
- Homogeneous, horizontal and low-turbulence clean water removal
- Clean water removal below the water surface in combination with a scumboard prevents the intake of floating sludge
- Completely closed system during the reaction phases
- Recording of discharge quantities without additional discharge measurement
- Dynamic, turbidity dependent control system, which is adjusted to the sedimentation and removal phase of the actual sludge settling properties
- Static support for securing the minimum water level
- Sizes available for discharge quantities from 250 to 1,500 m³/h

ADVANTAGES

- Unsinkable construction, water level-guided for wastewater replacement volumes up to 50%
- Arrangement of the inlet opening prevents floating sludge removal
- Optimum process sequence with synchronisation of the control schedule within the process control system, resulting in reduction of process duration
- Increase in process efficiency and consequent cost reduction
- Bus and ethernet link
- Easy maintenance access
- Substantial reduction in storage volume
- Suitable for plant extension or retrofitting

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