OPTISYS SLM 2100 – Optical measuring system for sedimentation profile measurement and continuous tracking of sludge blanket

OPTISYS SLM 2100 features an accurate and reliable profile measurement of your sedimentation tank using an optical sensor which travels through all layers of the tank reading suspended solids concentration at the different heights. This gives you more information than you can ever obtain with any comparable ultrasonic device, which hence generates better knowledge about your sedimentation process.
A clear view to the ground

OPTISYS SLM 2100 goes right down to the bottom of a tank and detects all sludge phases, supplying precise concentration and level measurements. Via the zone tracking function you can follow one specific concentration (i.e. the sludge blanket) and hence continuously monitor one specific “zone”, for instance for controlling the pumps during de-pumping of the sludge. You even have the option of recording a sludge profile, enabling you to detect sedimentation problems early and prevent sludge being washed out to the next stage.

Robust and reliable

OPTISYS SLM 2100 converts the measurement results into digital signals and transmits them using a reliable optical transfer system. The advantage of this system is that there are no contact problems and no wear from mechanical stress. An inductive coupling provides the sensor with a reliable power supply. The sturdy stainless steel housing together with the built-in heater and automatic spray cleaning of the sensor and cable make the OPTISYS SLM 2100 ideally suited for use in the harsh environment of wastewater treatment plants.

Savings in subsequent stages

The resource-saving measurement is available around the clock. An important effect of this is a higher suspended solids content in return and waste sludge through improved sedimentation process which provides better operation and energy savings in subsequent stages.

Highlights:

- Reliable measurement of the sedimentation profile as well as blanket and fluff levels
- Common operating and service concept with flow and level devices
- Continuous level measurement of sludge blanket (zone tracking)
- Direct measurement with an optical sensor
- Measuring range: 0...10 m; 0...30 g/l
- Stainless steel enclosure (IP 54)
- 2x 4...20 mA current outputs
- Build-in heater, 2x rake guard switch
- Low maintenance due to (optional) automatic flushing of sensor and cable after each measuring cycle
- 2x relays (as limit switch or status output)

The measuring principle

Unlike the commonly used ultrasound level measurement, the KROHNE sedimentation profile and sludge blanket measuring system is using an optical sensor which travels through the media. Thus it can directly measure the suspended solids concentration at different heights. The measurement of the suspended solids content is based on the method of the transmission of light, which provides precise measurement results independent of the sludge colour. The direct measuring principle excludes incorrect measurements due to echo returns from walls or separating zones as well as signal damping by fluff or floating sludge.

Contact

KROHNE Messtechnik GmbH
Ludwig-Krohne-Str. 5
47058 Duisburg
Germany
Tel.: +49 203 301 0
Fax: +49 203 301 103 89
info@krohne.com