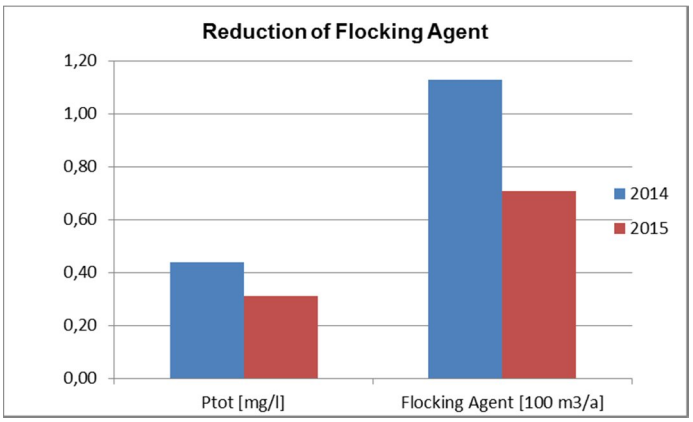
WWTP Nördlingen

Drastic reduction of flocking agent and increase of operating safety!

The Stadtwerke Nördlingen operate an anaerobic stabilizing wastewater treatment plant, which was expanded to an expansion size of 70,000 inhabitants (PE) by connecting further nearby communities during the last years.

Initial situation:
After new construction of the biological treatment as cascade denitrification and installation of the high efficient MESSNER Aeration Panels, the existing dosing of the flocking agent should be optimated. Reduction of the flocking agent amount together with satisfying the effluent values of P_{tot} should be reached by an individual controlling system.

Measures taken:
The RUDOLF MESSNER UMWELTTECHNIK AG invented a controlling concept, which enables the dosing of the flocking agent depending on the actual load. The amount of flocking agent is adapted to the current influent value of P_{tot} and biological activity. For this purpose two dosing stations are available, one in the influent, the second one in the effluent of the biological reactor. The required PO_4-P/P_{tot} probes are already existing. This individual controlling concept was implemented into the controlling level and is handled via the central process management system.



Results and Benefits:
With implementing the controlling concept, the amount of flocking agent could be reduced by 37% in a short period of time. The average P_{ges} effluent value was decreased by 29% in comparison to the same period of the previous year. Moreover the process stability was remarkably increased.

Today the installed RMU controlling system enables, together with the proved MESSNER Aeration Panel, the required oxygenation capacity depending on the parameters ammonia and nitrate and an optimated dosing of the flocking agent. This is resulting in an energy efficient operation and lowest effluent concentrations.

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