

Master thesis assignment description of hydrogen sulfide reduction by stripping in Odomin, 2015

Hydrogen sulfide is a big problem in wastewater pumping. The problem is enhanced by long retention times for the wastewater in anoxic / anaerobic conditions. High water temperatures and low pipe flow velocities magnifies the problem. pH is also a factor influencing on the formation of H₂S.



1 Odomin 65

Xylem has developed a stripper, Odomin, that mix H₂S-gas with air (oxygen) at the discharge point of a pipe system, which normally is a part of the complete pipe system. This reduces the problems odor (of rotten egg) and corrosion in a pump sump. Comprehensive measurements has been done that verifies that an Odomin 65 reduces the H₂S-levels approximately 10 times from a system where approximately 200 households are connected.

The assortment includes today Odomin 65, 1.0 meter in diameter and Odomin 150L, 1.8 m in diameter. The height of the Odomin is defined by the elevation of the incoming pipe.

The remaining effects from the thesis is an increased knowledge of the H₂S-stripping process in Odomin.

The goal with the thesis is to verify the Odomin performance and scaling, i.e. how many households can be connected?

The result of the large scale site measurements should be statistically significant. The measurements should be analyzed and compensated from error sources, such as inflow from other parts of the wastewater system, and a design model defined. The design model should include influences from factors such as BOD-content, water and air temperatures and variations in inflow (not possible to vary in the tests).

The time frame of the thesis is 20 weeks starting preliminary from March 2015.

For more information please contact:

Stefan Qvist, Manager Application Development and Support, Growth Center Transport

Tore Strandberg, Senior application engineer Application Development and Support, Growth Center Transport

Tore Strandberg
Senior Application Engineer
Growth Center Transport
Gesällvägen 33, 174 87 Sundbyberg
O: +46 8 475 67 88 M: +46 70 342 76 75
tore.strandberg@xylem.com