

Project idea:

Vorticella “invasion” at the Kalundborg wastewater treatment plant

Kalundborg Utility is running a major biological based waste water treatment process. A part of this process is also a 10 MW waste water based Heat Pump. It is utilizing the relatively warm waste water in Kalundborg – on average never below 22 C and sometimes close to or over 30 C as a co-supply to the District Heating system.

However, the filters protecting the Heat Pump Plant intake is often blocked by a slimy layer of Vorticella. These species also pose problems to other part of the waste water treatment process, and would be a major problem to possible future use of more advanced filter technology in relation to possible reuse of water from the plant to the industry in the Kalundborg Symbiosis.

Our own staff has not been able to find an explanation the “Vorticella problem”. It is not constant. Sometimes there are practically none in the filters and in other periods they are causing blockage of the inlet filters within a very short period of time. We have not been able to find any co-variation nor causal link to any know parameters.

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The present proposal from the company is an invitation to collaboration. The project will be planned, scoped and modified in close collaboration with the university supervisor in order to get the best possible project. The formal application procedure (and application deadline) for a Helix Lab Fellowship must be followed. All applications will be evaluated by the Helix Lab Board before a Fellowship may be given. Read more on our web-site, Helixlab.dk