



Development of a robust sensor to identify particle loads and particle properties in the sewer system and in the waterbody

Besides the ongoing progress in Wastewater Treatment, many rivers and lakes are still contaminated with pollutants and therefore will not reach the desired conditions claimed by the EU Water Framework Directive. An essential reason are suspended solids from discharged stormwater and combined waste water of urban areas. Those emissions influence the aquatic ecosystems and are highly contaminated with pollutants (i.e. heavy metals, PAH, MTBT). There is a lack of robust, reliable, affordable and especially low-maintenance sensors for a metrological monitoring. However one measure for resource and energy efficiency in Rainwater Management is a quality based control of the waste water flows during wet weather that allows the real time separation depending on the contamination level. Here as well the implementation obstacle is the availability of reliable sensors that provide failsafe, reliable and high-resolution data. The aim of this project is to develop a sensor that fills the mentioned gap in the available technology. Next to the load of particles, this sensor also will be able to roughly identify key properties of the particles such as density and the particle size distribution.

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