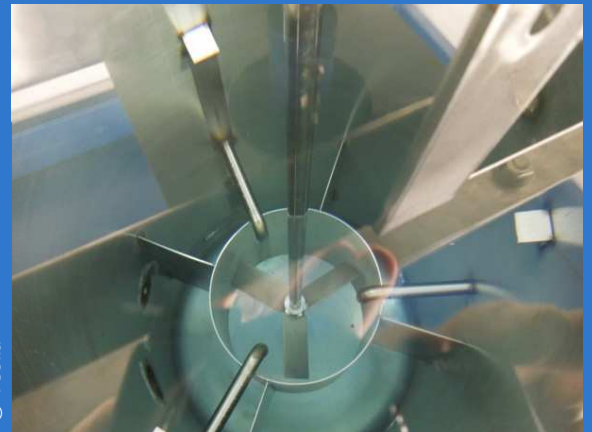


Phosphorus precipitation at small-scale sewage plants : Struvia™

Piloted by: Véolia with Cork Institute of Technology and Glasgow Caledonian University
 P-source: Waste water at small-scale wwtp
 P-product: "Phosphate salt" product



The process

The Struvia™ process is downscaled to precipitate phosphorus at small-scale waste water treatment plants (wwtp). This solution contributes to deal with the challenge of diffuse phosphorus discharge in remote, rural and islands locations.

The Struvia™ process based on an "all-in-on" single stage crystallisation reactor, which combines a Turbomix® draft tube impeller, a crystallisation zone and a lamella separator in a single tank.

The Struvia™ reactor developed for small-scale wwtp is made of FRP or stainless steel as standard, and in several sizes (S, M, L, XL...) to fit customer's needs and requirements. It can be use as downstream wwtp biological system to recover phosphorous before discharge (with no metallic salts) or applied on septic tank outlet prior biological stage (providing primary clarification).

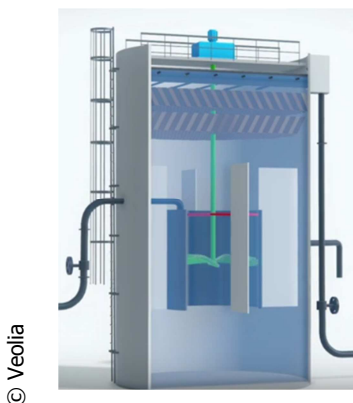
The product

By default, products foreseen are "phosphate salts" fertilizers.

Use of lime and low cost minerals will reduce the OPEX and amend soil.

The Struvia™ process can nevertheless use a wide range of chemistry, from calcium to magnesium cristallisation, depending on customer's need and wwtp specificities.

The demonstrator



Location: The mobile-set up of the Struvia reactors is run in Ireland and Scotland

Commissioning: planned as from July 2018 on

Input material: wwtp streams

Input mass: app. 200 l/h pilot demonstrator

Output: "Phosphate salt" based products

Output mass: to be determined

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