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Newsletter 2013 - #1

Colsen and HydroBusiness at Aqua-Nederland 2013



From March 19th till 21st 2013 Colsen and HydroBusiness will be represented at the AquaNederland Fair in Gorinchem (NL). Both firms present their mutual innovations and sustainable water solutions which are available 24/7. Examples are (energy) efficient waste water purification for re-use in industrial or agricultural applications. In general this offers a considerable reduction of water intake and goes hand in hand with substantial operational savings and reduction of permit related discharge costs.

Whenever feasible the organic matter present in waste water is converted into biogas. In addition the liberated nutrients (N and P) are reclaimed and used as artificial fertilizer. In this way the solutions provided are not only sustainable, they are often more economical too.

Feel free to visit our stand (#156). Obtain your admission ticket through our secretariat at +31.76.572.7750 or via forwarding your address details to info@hydrobusiness.nl.

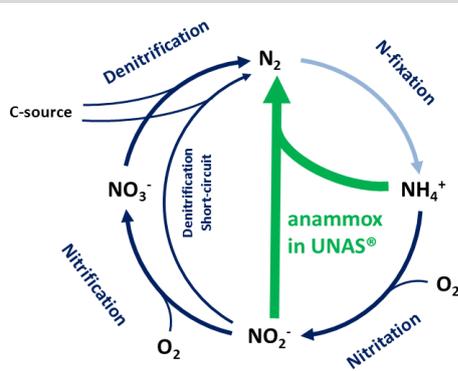
Colsen seminar at COPASA in Belo Horizonte (Brazil)

On the occasion of a [visit to COPASA's largest scale UASB installations](#) in Belo Horizonte (Brazil) Joop Colsen gave a seminar entitled : "The energy factory" in which he demonstrated how the Dutch waste water treatment technology is rapidly developing, whereby costs turn to a gain. In his seminar Mr. Colsen addressed thermophilic energy recovery and advanced nutrient treatment ([presentation](#)).

The fieldtrip fits the strategy to introduce UASB technology in Morocco, where OCP (Office Chérifien de Phosphates) is in need of efficient treatment for communal and industrial waste water. This seminar was an excellent opportunity for the COPASA hosts and for the foreign, diplomatic and academic guests (from the Departamento de Engenharia Sanitaria e Ambiental Escola de Engenharia - Universidade Federal de Minas Gerais) to get an appreciation of the most recent and on-going developments in waste water treatment in The Netherlands.



UNAS®: preparations for cold anammox pilot



Within our Dutch water boards diligent efforts are devoted to find more cost effective means of sewage treatment and to aim for adequate water effluent qualities. Goals have been defined to reclaim a maximum of energy and nutrients. In the Netherlands a large number of WWTP's has been constructed, which could benefit from a technological upgrade, with a key role for cold anammox.

Colsen and SieTec in collaboration with Water board Brabantse Delta submitted a project proposal, for the construction of a pilot installation in Nieuwveer to demonstrate the new technology. This innovative proposal was granted financial support as it offers some interesting advantages e.g.: 1) significant reduction of (operational) energy required, 2) shorter overall residence times, 3) improved effluent water quality, 4) smaller installation

footprint possible and 5) upgrade to energy self-sufficient process possible.

This project is funded by the European Fund for Regional Development within the framework of OP-Zuid (Operational Program for Zuid-Nederland).

Thermophilic sludge digestion at STP Bath

Thermophilic sludge digestion in theory offers a profitable outlook in support of the strategy to realize energy neutral or even energy producing STP's. As part of the proof of concept efforts, one of the full scale twin sludge digestion tanks will be tuned from mesophilic to thermophilic process conditions. This project will be executed within the framework of STOWA by the water board Brabantse Delta and coordinated by Colsen, expert in thermophilic digestion.

As a prelude to the full-scale investigation a pilot study was conducted at the STP site in 2012, with focus on adaptivity of mesophilic species to the thermophilic digestion conditions. This pilot test was successfully finalized: after the temperature shift to thermophilic conditions the biomass adapted and the digestion

process was stable again. From this point on the process showed higher biogas production, larger sludge digestion ratio, and enhanced liberation of nutrients like nitrogen and phosphorous. The latter opens avenues to the realization of other ambitions of the Dutch water boards: nutrient recovery!



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