



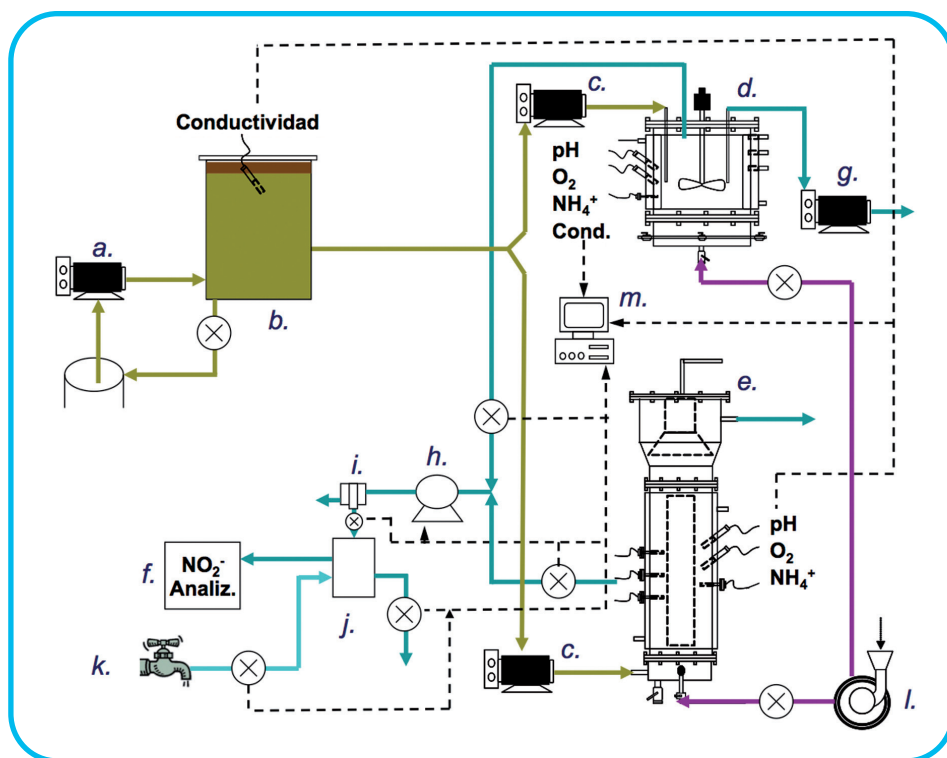
Optimisation of wastewater treatment plant (WWTP) operating through autotrophic nitrogen removal (ELAN) in the return flow of a sludge digester

Elan Trainasa Project

PROJECT

The aim of this project is to demonstrate, on a pilot-scale, a new technology that removes nitrogen from the return sludge line in a WWTP, a flow that can comprise between 15% and 25% of the total nitrogen load.

The process, which Aqualia has called ELAN, combines the biological process of partial nitrification with that of anaerobic ammonium oxidation in a single reactor. Both processes take place inside granular biomass, the nitrification on the external part and the autotrophic denitrification process in the most internal anoxia part.



Location: Vigo (Pontevedra, Spain).

Duration: September 2009 – December 2012, divided in 4 annuities.

Current status: The project was successfully completed. An autotrophic nitrogen removal process in a semi-continuous granular biomass reactor has been launched. The reactor, with a capacity of 200L, has been inoculated with 1g VSS and after the semi-continuous unit has complete a operational year, 2kg VSS has been obtained with maximum treatment speed of 1kg N/(m³ d).

Total Budget in Euro / Trainasa: 142,600 €.

PROJECT PARTICIPANTS:

Partners:

Trainasa Tratamiento Industrial De Aguas S.A.



Main Collaborators:

Universidad de Santiago de Compostela
Universidad de Vigo

Universidade de Vigo



Contact details:

José Ramón Vázquez _____ aqualia _____ jvazquezp@fcc.es

Ramón Méndez _____ USC _____ ramon.mendez.pampin@usc.es

Miguel López _____ Universidad de Vigo _____ mflopez@uvigo.es

GRANT:

Support name and granting body:

The Council of Galicia. Research project grants for private companies, and groups of private and public companies, whose purposes include carrying out research activities, INCITE 2009 programme. Ministry of Economy and Industry (Sectoral technology of the natural environment and sustainable development), established under Order of 24 June 2009 (Galician Official Gazette of 6 July)

Project: 09MDS013E

Grant: Subsidy of 50% of budget

Total subsidy/Trainasa: 72,300 €

