



INTERNSHIP: ELECTROCHEMICAL SYSTEM FOR THE REMOVAL OF POLLUTANTS AND DIFFICULT COMPOUNDS FROM WASTE STREAMS

SOLID SOLUTIONS IN A FLUID WORLD

Background

Climate change and the continuous population growth are key contributing factors to clean water shortage worldwide. One way to mitigate the rise of water scarcity is by improving the efficiency of wastewater treatment process and the possibility for water reuse.

Wastewater treatment comprises processes, which usually require a significant amount of chemical dosage. The chemicals used affect both the amount of sludge generated and the effluent quality as well. The treated water is characterized by a high salt content, which thereafter must

be decreased to the desired discharge or reuse effluent quality level. In that perspective, the electrochemical technologies are a promising alternative to the conventional systems. They have advantages such as robustness, ease of operation, simple equipment, less treatment time, use of less or no chemicals and smaller amount of sludge produced.

Goal and activities

The goal of this internship or graduation project is to develop, design and test an electrochemical system for the removal of pollutants from wastewater. During that assignment, series of lab and pilot scale experiments will be performed with industrial waste streams with various origin. The data collected will be analysed and translated in use for a full scale design. Moreover, an estimation of the investment and operational costs will be investigated based on the experimental data.

Who we are

Nijhuis Industries delivers 'solid solutions in a fluid world' as a response towards a greener economy. Nijhuis is aiming to turn cost centers into profit centers with solutions for sustainable water use and resource recovery. To accommodate the customer requirements, Nijhuis offers Design, Build, Finance, Operate and Maintain (DBFMO)

installations to meet today's challenges, as well those of the future, across a wide range of industries and municipalities in today's 'fluid' world. With more than 2400 references sites and activities in over 110 countries around the globe, it is our ambition to help customers and deliver solutions to:

- Reduce the amount of (waste)water and effluent charges;
- Reuse treated effluent or process water;
- Recover water and resources from your waste and (waste)water.

Type of education: BSc or MSc Chemical, Process or Environmental Engineering

Location: Nijhuis Water Technology, Doetinchem

Duration: 4 – 6 months

Start: February 2020

More information and application

If you are interested in an internship at Nijhuis Water Technology please send the following to Internship. NWT@nijhuisindustries.com :
Your motivation, your CV and the period and duration of your internship