

Waste to Chemicals Bachelor Internship

1.1 Thesis assignment description

As an intern you will work at our location in Moerdijk, the Netherlands, where currently our Waste to Energy Recycling (WER) unit is located. Currently, the control system of the WER is outdated and not “future proof”. Due to being a test setup, a lot of new things, sensors and engines, can/will be added but currently there is no more space in the control cabinet. As an intern, it will be your job to work together with the electrical/automation/IT team to setup a new control cabinet. You will be more focussed on the Programmable Logic Controller (PLC) and the Supervisory Control And Data Acquisition (SCADA) system. The goal is to make the WER unit as automated as possible (unmanned but guarded), as easy as possible to operate and easy expandable in the programming code.

Due to being a test setup and still in development, gathering the data is an important aspect of the WER. The data is used for making Business cases, system development and troubleshooting if necessary.

Another part of the internship will be to redesign the electrical cabinet of our shredder module. This module is currently controlled by a small cabinet designed in Bulgaria. Currently we have no room to expand and also no drawings of it to see how everything is connected. It’s going to be your task to map everything, make a new layout and expand the current cabinet.

Thesis tasks:

- Making design of PLC with expanding possibilities.
- Making design of HMI/SCADA with expanding possibilities.
- It must meet the predetermined requirements and wishes of Waste4ME
- Setup the network with different layers of protection
- Develop and test control systems on the device
- Test the WER and measure levels of automation
- Program the control system for further automation
- Mapping and designing a control cabinet

1.2 About Waste4ME BV

The company Waste4ME positions itself at the intersection of different industries. Waste4ME is pioneering the plastic recycling industry by giving previously incinerated plastic waste a second life. Our company turns a global environmental problem into low-carbon products and valuable petrochemical products. Our solution also allows implementing sustainable waste disposal techniques and bridge intermittent energy supply in remote locations. WER unit (waste reducer energy generator) is a mobile waste management tool based on pyrolysis technology. It is designed for tackling waste, where recycling is not feasible and where waste disposal is an issue. Thanks to its mobile nature, WER allows to avoid transport costs, electricity cost, gas boiler cost and gas for a boiler.

1.3 Working at Waste4ME

As you gain knowledge and experience in different sectors you can grow within the company. Our team mentality is straightforward and product oriented. You have the freedom to plan your work and set your own milestones in line with the company goals. Additionally, if you want to suggest a different topic and you think you can add value:

make a proposal including milestones and catch our attention. We are a growing company and are looking for people with ideas.

1.4 Position requirements

For the position are we looking for the following background:

- Bachelor degree in computer engineering degree or electrical engineering degree
- Preferably knowledge of dynamic modelling and practical solution seeking
- Sufficient knowledge of programming
- Ability to work with your hands and assemble a new cabinet from the ground up
- Ability to work result oriented with given boundaries (time, budget, quality) in a team
- Ability to deal with technical uncertainties and form vision
- Good knowledge of the English language

1.5 Good to have

For the practical execution of the work and filling in with the team we have additional wishes that can give you a higher probability of being selected.

- Knowledge of Schneider Electric PLC and HMI/SCADA
- Long-term personal vision

1.6 Reimbursement

Reimbursement is € 400 – 600 per month (excluding expenses) depending on candidate's qualifications.

1.7 Working Hours

40 hours per week (Negotiable)

1.8 Contact

If you are interested, send your application with cv and motivation or even better with your first idea how to approach to Eng. Christiaan Huibregtse on c.a.huibregtse@waste4me.com or by phone on +31639136979.