

## Job Specification – Design Engineer

Reporting to	Head of Resource Recovery
Location	London, England
Job Type	Contract with opportunity for full time employee
Requirements	U.K. driving licence
Start Date	March 2020
Job Duration	Full time
Salary	Competitive

## Background

Loowatt has designed and patented a waterless “waste-to-value” sanitation system with current applications as an environmentally friendly alternative to chemical flush toilets and porta loos at outdoor events and construction sites in the United Kingdom and as critical infrastructure in cities globally where access to sanitation is lacking. Loowatt has offices in London, England and Antananarivo, Madagascar with operations in the UK, Madagascar, and The Philippines.

In the UK, Loowatt’s toilets serve a variety of applications where the waste is collected and processed in utility-run anaerobic digestion systems to produce power. The Resource Recovery team is responsible for closing the loop on the Loowatt value chain and creating value from each of its waste streams. For Loowatt to be successful in selling hardware, a complete full circle solution needs to be provided that is easily adaptable and scalable both in the UK and emerging markets. The priority of the Resource Recovery department includes providing Loowatt customers with a valuable and ecological solution for all their waste processing and resource recovery needs.

## Role

The Design Engineer will work within the Resource Recovery team to support their goals and operational objectives to design and manufacture a new version of their waste processing machinery in 2020. The Design Engineer will contribute to the detailed design of the machine including CAD work, design reviews and documentation, contract and stakeholder management, as well as some operational tasks including equipment testing, commissioning and waste processing operations. The role will be centred around technical work as opposed to project management allowing for deeper focus on meeting product and systems requirements.

The main tasks in the role include:

- Delivering detailed designs for production-ready products and machinery.
- Documenting design process and ensuring compliance with relevant specifications (i.e. CE marking).
- Writing design briefs and other product documentation including operating manuals and maintenance guidelines.
- Conducting ground-up research and development for new products and systems.
- Presenting and sharing information to wider team.
- Reporting to line manager on above activities.

Additional tasks might involve:

- Being the point of contact for troubleshooting and maintenance support for first generation equipment.
- Ensure compliance with regulations and standards for waste processing and treatment.

## Key Skills and Experience

- A Master's degree in Mechanical Engineering, Industrial Design or other relevant degree
- CAD experience (Inventor or Solidworks)
- Production of engineering drawings
- Hands-on prototype building;
- Engineering calculations including stress, thermal, energy and power calculations, applying safety factors etc
- Materials selection and manufacturing process selection
- Knowledge of key industrial machine elements: motors, transmissions, bearings, shafts, linear systems, common fasteners and fixings etc.
- Experience using Arduino to develop automatization or data collection on systems would be an asset
- Previous mechanical experience working with or operating machinery
- Experience in contacting suppliers and manufacturers would be preferred

## Other Competencies

- Formulating achievable and targeted projects applying resource and time constraints as well as business and user needs and expectations
- Creating clear and useful documentation to support projects
- Delivery of high-quality design work and final products that meets the requirements detailed in project briefs
- Managing tasks to ensure projects remain on schedule and within budget
- Displays gravitas and resourcefulness, drive and energy; delivers with the resources available
- Willingness to be hands on and work in the field
- Must be a self-starter and ability to work independently as well as in a team
- Strong written and verbal communication
- A UK driver's license is preferred

To apply, please send a CV and cover letter to [Megan@loowatt.com](mailto:Megan@loowatt.com) before the 6<sup>th</sup> of March 2020.