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Vacancy for 'Process Engineer'

QinetiQ Space, located in Kruibekke, develops scientific experiments for research in space focused on the International Space Station and other microgravity environments.

QinetiQ Space is also active in the development of satellites.

We wish to strengthen our team with a 'Process Engineer', to support the activities in the field of Life Support Technology, MELISSA related projects, In-situ Resource Utilisation and Life Science.

Job description:

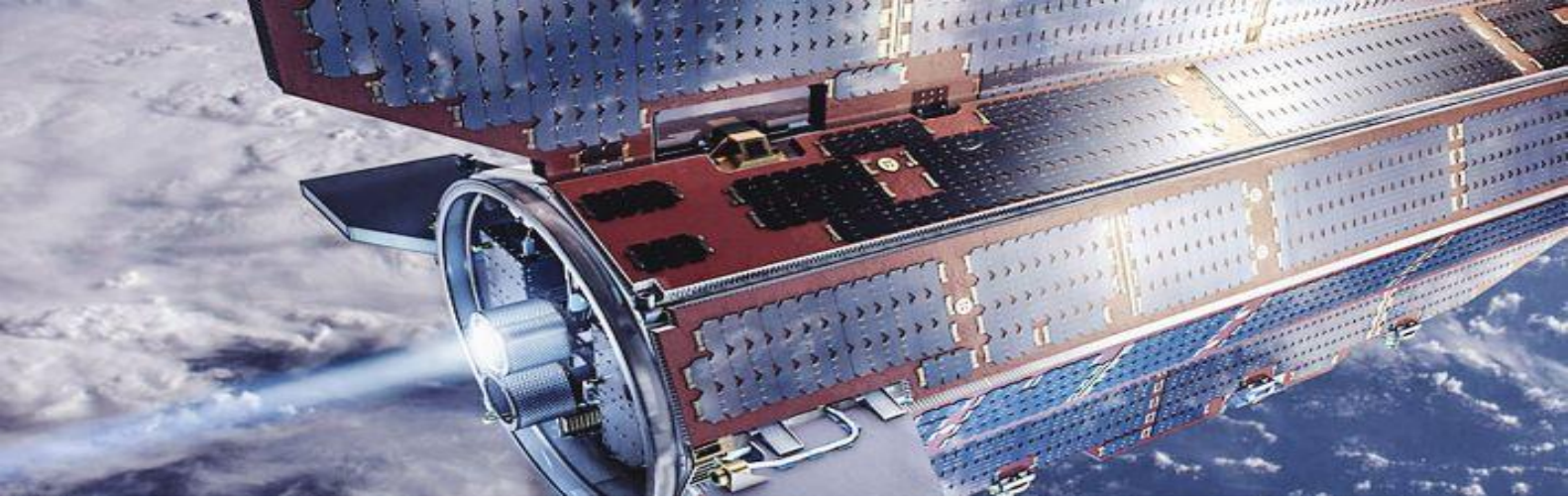
In this position, you will participate in the development of technology required to survive in space conditions. This includes the production of water, food and oxygen from recycled materials and in-situ resources.

- Conceptual design of process flows to produce drinking water, oxygen, food from recycled materials or in-situ resources (Process Flow Diagrams)
- Detailed design and engineering of laboratory and pilot scale demonstrators (Process & Piping Diagrams)
- Support the design by mathematical modelling to create a virtual plant model for the simulation of selected processes
- Define the key manipulated variables of the process and define control strategies
- Translate the design in a development plan, prepare a functional description and identify the requirements for equipment
- Coordinate the purchase/manufacturing/assembly of the equipment in cooperation with the system, mechanical and electrical engineering teams and suppliers/contractors
- Define a test and evaluation plan with associated procedures
- Evaluation of process performances based on laboratory and pilot scale (process 'capability' and 'performance' parameters)
- Prepare technical documentation, manuals, test reports...
- Prepare operational scenarios for future space application of processes
- Adapt selected technology to the space environment (radiation, reduced G, vacuum,...)
- Translate phase A/0 concepts to requirements for future space technology development (phase B/C/D)

Desired skills/ experience/ knowledge:

- MSc or PhD in the field of bioscience engineering (environmental engineering, chemistry and food technology, bioprocess simulation and control, cell biology, ...)
- Familiar with key biological, chemical and physical processes for water treatment and (waste) material processing, including;

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- Microbial dynamics and growth kinetics
- Biological and chemical oxidation-reduction processes, bio-electrochemical processes
- Water chemistry
- Liquid/gas equilibria and transfer processes
- Solids separation and transport processes
- Membrane technology
- Affinity for process design supported by mathematical modelling of involved processes
- Affinity with laboratory procedures and pilot scale testing for validation of processes
- Familiar with instruments and sensors to measure process parameters
- Familiar with disinfection and sterilisation technology and evaluation methods
- Knowledge of biological and chemical material compatibility
- Awareness of specific space conditions such as radiation, vacuum, reduced gravity and their effect on process performance
- Enthusiastic result-oriented and fast-learning team player with good communication skills at all levels.
- Fluency in English and preferably also in Dutch.

Offer:

The leading edge technological aspects and variety of work makes working at QinetiQ Space an exciting challenge. QinetiQ Space offers you a unique opportunity to fully develop your talent/career and prove yourself in one of the top high technological companies in Flanders. A challenging and exciting opportunity in a team of enthusiastic and inspiring colleagues is waiting for you.

Work location:

QinetiQ Space Kruibeke, Belgium.

Want to be part of our team?

Visit our website <http://qinetiqspace.talentfinder.be/index.aspx>
and mail us your motivation letter + cv.