



Moltex Energy Job Description

Job title: Industrial Chemist

Job location: Birchwood, Warrington, United Kingdom

Job purpose:

Development of the chemistry of Moltex Energy's Stable Salt Reactors (SSR) and associated waste reprocessing technology (WATSS). Interfacing with the multidisciplinary team to support the overall goal of bringing SSR technology to market by 2030.

Reporting and working relationships:

The job holder will report to the UK Lead Chemist and will work closely with the Chief Scientific Officer and other Moltex team members. This job will require effective working with internal and external teams including physics, materials science, engineering design and manufacturing.

Responsibilities:

Industrial Chemist(s) will take responsibility for the design and delivery of test programs relating to various aspects of the SSR and WATSS chemistry regime. Topic areas will include the chemistry and thermo-physical properties of prospective fissile and cooling salts, evaluating and developing the materials performance and corrosion management techniques, and development of the separation chemistry.

Duties and tasks:

- Planning and delivery of laboratory trials for the purpose of verification and validation of chemistry design and materials selection.
- Manage the delivery of SSR chemistry and materials tasks in accordance with the agreed schedule and budget, and provide regular progress reporting.
- Work with and build relationships with industry and academic experts to maximise input of existing knowledge and expertise into the SSR chemistry design, materials selection, and other R&D activities.
- Present and substantiate nuclear chemistry and materials selection to regulatory bodies and other stakeholders.
- Ensure that all work is delivered in accordance with the Management System.
- Contribute to the technical assessment and management of subcontractors.
- Contribute to the development of models used to predict the performance of corrosion management techniques for plant materials in a molten salt environment.

Skills, qualifications and experience:

Relevant knowledge and experience in leading applied chemistry/R&D for industrial process/product development.

Essential:

- Higher degree in chemistry.
- Experienced industrial chemist with good knowledge and practical experience in the design of experimental programs, data management and reporting.
- Experience in working with Molten Salts and/or uranium fluorides in a laboratory setting, gained through either PhD and/or industry experience.
- Broad science and engineering appreciation with the demonstrable ability and intellect to understand other disciplines and effectively apply this to their development and design work.

Desirable:

- Knowledge of nuclear plant radiochemistry.
- Experience in corrosion mechanisms and corrosion management.
- Development of complex models and simulations of chemical processes/fluid dynamics.
- Experience of providing operational support to industry to improve performance and/or justify continued safe operation.

Behavioural skills and personality:

The company's mission is to bring SSRs to market as quickly as possible. To achieve this the role holder will need to be:

- Ambitious to become an industry recognised technical expert in SSR chemistry.
- A problem solver who is driven to find simple solutions.
- Delivery focused as well as being technically strong.
- Technically adaptable with enthusiasm to take on tasks beyond their current skill set, to develop the capabilities demanded by the evolving program of work.
- An excellent team player who will work with others to ensure 'the whole is greater than the sum of its parts' and progress the reactor design as a whole.
- A highly effective communicator who can explain, debate, and justify the SSR chemistry to a range of stakeholders with differing technical knowledge both orally and in writing.



- An adaptable individual who will be comfortable in a rapidly growing and changing company.

Remuneration:

Negotiable based on experience.